ELISA Reference Guide & Catalog
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R&D Systems ELISA Reference Guide

R&D Systems has over 20 years of experience designing, testing, and optimizing immunoassay kits to ensure the highest level of performance in analyte quantification. We currently offer more than 400 Quantikine®, Quantikine IVD®, QuantiGlo®, Fluorokine® E, Parameter™, Surveyor™ IC, and Cell-Based ELISA Kits for a number of different analytes and species, including human, mouse, rat, canine, primate, and porcine. Choosing quality reagents that will lead to results you can trust is one of the most critical aspects of scientific research. But how do you know if you are choosing a quality product? One measure of product quality is the frequency of citations in the scientific literature. R&D Systems ELISAs are referenced more than any other ELISA manufacturer, and we are honored by the trust that so many have placed in our products.

Since researchers often rely on primary literature to aid in the selection of reagents for their studies, we have compiled a searchable database that contains published scientific journal articles citing the use of our ELISA products, including specific applications and sample types. This ELISA Reference Guide and Catalog is a snapshot of our current database. It presents our assays in alphabetical order by analyte with selected references from our database listed below each kit (beginning on page 16). Reference selection was not based on the exclusive use of R&D Systems products, nor judged for inclusion based on scientific merit. Many references listed in this guide were selected based on the use of sample types that we do not validate in-house, such as various tissue homogenates, synovial fluid, and others.

R&D Systems ELISA Reference Guide

R&D Systems is the Most Referenced ELISA Manufacturer. A literature survey was conducted to determine the number of citations referencing the use of R&D Systems ELISA Kits compared to the number referencing ELISAs manufactured by other companies. The survey included 860 manuscripts that were published in one of 44 high impact journals from several different general research areas, including immunology, signal transduction, development, neuroscience, bone/endocrinology, and hematology. A total of 433 ELISA citations referencing immunoassays from 66 different vendors were identified in the survey.

R&D Systems Complete ELISA Kits

<table>
<thead>
<tr>
<th>ASSAY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantikine ELISA</td>
<td>Quantikine Kits are our respected line of complete colorimetric sandwich ELISAs for human, mouse, rat, canine, rhesus macaque, and porcine cytokines, chemokines, growth factors, adhesion molecules, MMPs, caspases, and more.</td>
</tr>
<tr>
<td>Quantikine HS ELISA</td>
<td>Quantikine HS Kits are highly sensitive colorimetric sandwich ELISAs for the quantitation of human cytokines. These kits can detect femtogram levels of analyte.</td>
</tr>
<tr>
<td>Quantikine IVD ELISA</td>
<td>Quantikine IVD Kits are colorimetric sandwich ELISAs for in vitro diagnostic (IVD) use. IVD-labeled kits currently available include Epo, sTfR, and β2-Microglobulin.</td>
</tr>
<tr>
<td>QuantiGlo ELISA</td>
<td>QuantiGlo Kits are chemiluminescent ELISAs for human proteins. These kits offer increased sensitivity and a wider dynamic range, reducing the need for extra dilutions. A chemiluminescence plate reader is required to run these assays.</td>
</tr>
<tr>
<td>Fluorokine E Kits</td>
<td>Fluorokine E Kits are capture antibody-based fluorometric enzyme assays for the quantitation of active and total MMPs. A fluorometric plate reader is required to run these assays.</td>
</tr>
<tr>
<td>Parameter Kits</td>
<td>Parameter Kits are complete assay kits for the quantitation of eicosanoids, cyclic nucleotides, and other small molecules.</td>
</tr>
<tr>
<td>Surveyor IC ELISA</td>
<td>Surveyor IC ELISA Kits are colorimetric kits designed to detect and measure intracellular factors important for cell signaling.</td>
</tr>
<tr>
<td>Cell-Based ELISA</td>
<td>Cell-Based ELISA Kits are fluorescence assays designed to detect a target intracellular protein and a second normalization protein in whole, fixed cells within the same microplate well. Lysate preparation is not required.</td>
</tr>
</tbody>
</table>

Quantikine, Quantikine IVD, QuantiGlo, and Fluorokine are registered trademarks of R&D Systems, Inc. Surveyor and Parameter are trademarks of R&D Systems, Inc.

*Assay Principles for each kit type can be found on pages 8-14.
Introduction

R&D Systems is Committed to Producing High Quality ELISA Products

Making a Quality ELISA

Producing a quality ELISA strongly depends on optimization during development. R&D Systems ELISA Kits are required to meet stringent manufacturing and quality control standards to ensure that they provide the highest levels of performance and consistency. Quantikine Kits are complete, fully validated, ready-to-run immunoassays that are designed to measure proteins in a number of complex sample types. These assays are based on the two-site sandwich immunoassay principle in which two highly specific antibodies are used to detect a target analyte. Multiple steps are taken during development to ensure that Quantikine ELISA Kits will provide superior performance without the need for further assay optimization by the customer. These include:

- Careful selection of antibody pairs for optimal performance
- Automated microplate coating with precision of less than 10% coefficient of variation (CV)
- Cross-reactivity and interference testing with a panel of up to 100 factors
- Formulation of diluents that alleviate interferences due to matrix phenomena and heterophilic antibody interactions
- Correlation to NIBSC/WHO Standards when available
- Performance testing with all validated sample types

Evaluating the Performance of ELISA Kits

Quantikine ELISA Kits provide our customers with the precision, specificity, accuracy, and sensitivity that they expect due to rigorous validation testing. This testing includes:

- Intra- and inter-assay precision
- Analysis of natural samples in each of the validated matrices such as serum, plasma, cell culture supernate, and more
- Interference of blood components
- Linearity
- Recovery
- Component and kit stability
- Edge effect

These tests are performed over many months by several technicians to ensure that the assay will be reproducible both well-to-well and lot-to-lot. Data obtained from performance testing on validation batches of our kits are provided in the product data sheets.

The validation process results in a comprehensive data packet that is reviewed by quality assurance personnel, who ensure that the test results meet established guidelines. These guidelines require that:

- Controls meet established specifications
- Non-specific binding, low standard and high standard signals meet the established specifications
- Sensitivity, determined by assaying multiple replicates of the zero standard, falls within the established specifications
- Standards match master calibrators within the established specification

The following sections outline the variables that may affect the outcome of your ELISA experiments, and how these variables are addressed during the development of R&D Systems Quantikine ELISA Kits. By carefully considering these variables before the product is released, our scientists ensure that Quantikine Kits will provide you with reliable, reproducible results without the need for further assay optimization.
Quality Antibodies Provide the Foundation for a High Performance ELISA

Our ELISA kits are developed using highly purified antibodies. For our sandwich ELISA kits, including the Quantikine, Quantikine HS, Quantikine IVD, and QuantiGlo Kits, testing is performed on several different monoclonal and polyclonal antibodies to determine which combination optimally couples for use in analyte detection. Selected antibodies are carefully titered to ensure that the concentrations chosen will give the best possible results for the assay. During development, the capture antibody is coated onto the microplate in several different concentrations to determine the concentration that offers the most binding and the best precision. Different concentrations of the detection antibody are subsequently tested to determine the concentration at which the detection antibody optimally pairs with the capture antibody to give the best signal-to-noise ratio.

Precision & Reproducibility:
Providing Confidence in Your Results

Immunoassay precision is defined as the reproducibility of results within and between assays. This characteristic of an immunoassay is extremely important in order to: 1) provide assurance that the results obtained throughout a study are accurate and reproducible from one experiment to the next and 2) determine if two results are the same or different. Precision is measured as a coefficient of variation (CV) from the mean value. Two types of precision should be considered, intra-assay precision and inter-assay precision. Intra-assay precision is the reproducibility between wells within an assay. This allows the researcher to run multiple replicates of the same sample on one plate and obtain similar results. Inter-assay precision is the reproducibility between assays. Inter-assay precision guarantees that the results obtained will be reproducible using multiple kits over a period of time. R&D Systems Quantikine Immunoassays typically have CV values less than 10% across the standard curve for both intra- and inter-assay precision. These low CV values allow the researcher to perform repeated assays and be confident that the results are consistent throughout the study.

Quantikine ELISA Kits Are Tested for Stability and Reproducibility. A. Three samples with different concentrations of IL-6 (colored lines) were assayed using the same lot of the Human IL-6 Quantikine ELISA Kit (Catalog # D6050) over a 15 month period. B. Three samples with differing IL-6 concentrations (colored lines) were assayed using four different lots of the Human IL-6 Quantikine ELISA Kit (Catalog # D6050) over a 12 month period.
Specificity: Measuring Only the Analyte of Interest

Imмуnoassay specificity can be compromised by antibody cross-reactivity and interference. Cross-reactivity occurs when a molecule other than the analyte of interest is bound by both antibodies leading to a false positive result. Interference occurs when other substances in the sample matrix modify the antigen-antibody interaction, preventing an assay from recognizing its designated analyte.

These problems are mitigated by proper development and testing. False positive results may be due to matrix effects that only diligent validation and quality control measures can identify. This being the case, an ELISA can not be judged based solely on whether or not it produces a signal, until that signal is confirmed to be produced by the analyte of interest. In most cases, this can be accomplished by assaying the linearity of dilution (see page 6).

R&D Systems carefully selects antibodies, optimizes coating and conjugate buffers, and selects assay diluents to eliminate matrix effects. To gauge the specificity of an assay, factors related to the analyte are tested for cross-reactivity and interference. The members of the panel and the results of this testing are reported in our product data sheets.

Binding differences may occur between natural and recombinant samples due to conformational changes of the antigen after it is bound to the capture antibody. These conformational changes may affect the binding of the detection antibody. Quantikine Kits are optimized so that the antibodies recognize both recombinant and natural antigen with equal efficacy.

<table>
<thead>
<tr>
<th>Linearity Experiments Identify False Positive Signals</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sample Dilution</th>
<th>Quantikine Kit</th>
<th>Kit 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:2</td>
<td>105%</td>
<td>73%</td>
</tr>
<tr>
<td>1:4</td>
<td>108%</td>
<td>ND</td>
</tr>
<tr>
<td>1:8</td>
<td>106%</td>
<td>ND</td>
</tr>
</tbody>
</table>

Linearity claim: 85-115% for Quantikine Kit, 89-118% for Kit 2.

False Positive ELISA Signals Can Be Identified by Assaying the Linearity of Dilution. Serial dilutions of a cell culture supernatant were assayed for natural linearity using two different TIMP-2 ELISA Kits. Diluted samples measured using the Human TIMP-2 Quantikine Kit (Catalog # DTM200) gave recovery results between 105-108% of the neat sample, supporting the linearity claim of the kit. In contrast, the target analyte was not detectable beyond the first dilution in samples measured with the second kit, indicating that the assay was producing a false positive signal. ND=Not detectable.

Interference Testing of the Human TNF-α Quantikine ELISA. TNF-α, at concentrations of 125-1000 pg/mL, was measured in the presence or absence of soluble TNF receptors (sTNF RI or sTNF RII) using the Human TNF-α Quantikine ELISA Kit (Catalog # DTA00C). The results demonstrate that the presence of the soluble TNF receptors at concentrations up to 1000 ng/mL does not affect the TNF-α concentration determined using the Quantikine ELISA Kit.

Quantikine ELISA Kits Are Developed to Detect Natural and Recombinant Proteins. A serum sample containing activated human TGF-β1 was serially diluted (blue line) and compared to the TGF-β1 standard curve (red line). Results show that the Human TGF-β1 Quantikine ELISA Kit (Catalog # DB100B) measures recombinant and natural TGF-β1 with equal effectiveness.
Recovery

Complex sample matrices, such as serum and plasma, may contain interfering factors that affect the ability of an assay to accurately quantify the target analyte. Recovery experiments are used to determine if assays are affected by interfering factors. Low, medium, and high concentrations of analyte are spiked into all validated sample types and then analyzed for recovery. The results are expressed as a percentage of analyte recovered and are reported in each product data sheet. Our criteria require that recoveries are between 80-120% across the concentration range of the assay, demonstrating no quantifiable matrix interference for each sample type. If interfering factors are found, R&D Systems formulates diluents that minimize their effects.

Dkk-1 Recovery Analysis

<table>
<thead>
<tr>
<th>Sample</th>
<th>Average % Recovery</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell culture media* (n=4)</td>
<td>103</td>
<td>97-109%</td>
</tr>
<tr>
<td>Serum* (n=4)</td>
<td>99</td>
<td>85-115%</td>
</tr>
<tr>
<td>EDTA plasma* (n=4)</td>
<td>94</td>
<td>86-102%</td>
</tr>
<tr>
<td>Heparin plasma* (n=4)</td>
<td>98</td>
<td>92-106%</td>
</tr>
</tbody>
</table>

* Samples were diluted prior to the assay as directed in the product data sheet.

Analysis of the Recovery of Dkk-1 Using the Quantikine ELISA Kit. The recovery of Dkk-1 spiked to various levels throughout the range of the assay was assessed for all validated sample types of the Human Dkk-1 Quantikine ELISA (Catalog # DKK100).

Linearity of Dilution

Dilutions should always derive the same final analyte concentration for a sample. This is known as assay linearity. Interfering factors can compromise assay linearity unless the assay is designed to overcome these effects. We generate a dilution series using kit diluents across the dynamic range of the assay for each validated sample type. The results are expressed as a percent observed from expected. Values between 80-120% show good assay linearity. Each product data sheet documents the mean and range of percent linearity for all validated sample types.

Linear Dilution to Assess Matrix Effects. A. Expected results from a linearity of dilution experiment when no interfering factors are present in the matrix. B. Potential results from the same experiment if interfering factors are present in the matrix. Factors in complex matrices can interfere with the analyte of interest. This effect may be revealed by unexpected linear dilution values.

Assay Linearity Is An Important Measure of Immunoassay Accuracy. A. Spiked heparin plasma samples were serially diluted and assayed for human Thrombomodulin using two different ELISA kits. Samples measured with the Human Thrombomodulin/BDCA-3 Quantikine ELISA Kit (Catalog # DTHBD0) had recovery values between 90-110% of the neat sample and displayed acceptable assay linearity (gold line). In contrast, the percent recovery of diluted samples measured with the second kit had a range of 141-325% (burgundy line), suggesting that interfering factors were preventing accurate measurement of the target analyte. B. Spiked heparin plasma samples were serially diluted and assayed for human Tissue Factor Pathway Inhibitor (TFPI) to determine the accuracy of two different immunoassay kits. Samples measured with the Human TFPI Quantikine ELISA Kit (Catalog # DTFP10) showed acceptable recovery values (90-110% of the neat sample; red line), while those measured with the second kit (green line) did not (80-7% of the neat sample).
Sensitivity: Measuring Proteins at the pg/mL Range

The minimum detectable dose is the lowest measurable value that is statistically different from zero. It is calculated by adding two standard deviations to the mean optical density value of several zero standard replicates and determining the corresponding analyte concentration from the standard curve. The better the sensitivity of an assay, the lower the useful working range (standard curve range) will be. Quantikine ELISAs are optimized to ensure high signal, low background, and the best sensitivity possible.

The Minimum Detectable Dose for Many Quantikine ELISA Kits Allows Proteins Present at the pg/mL Range to be Accurately Measured. A. Serum from 86 apparently healthy individuals was assayed using the Human IL-12/IL-23 p40 Quantikine ELISA Kit (Catalog # DP400). B. Serum from 41 apparently healthy individuals was assayed using the Human IL-6 Quantikine HS ELISA Kit (Catalog # HS600B).

Calibration: Ensuring Consistency from One Lot to the Next

Each Quantikine ELISA Kit includes an immunoassay standard that is calibrated against highly purified material. R&D Systems assigns a mass value to a standard based on comparison to a master calibrator. These master calibrators are manufactured during the development of an ELISA and are used to maintain the consistency of kit standards. All future lots are compared to the master calibrator to ensure that no drift in sample values occurs.

Due to the fact that different mass value assignments are made for ELISA standards, sample values produced using one manufacturer’s kit may not be directly comparable to those obtained using another manufacturer’s kit. R&D Systems supplies a correlation to a WHO international reference material, when available. This calibration allows a researcher to take the values obtained with a Quantikine ELISA Kit and compare them to values obtained with other assays (assuming that the other ELISA manufacturer provides this conversion factor as well).

Analytical Testing Service

R&D Systems Analytical Testing Service (ATS) utilizes Quantikine, QuantiGlo, and Parameter Immunoassays to test customers’ samples. R&D Systems ATS Facility features state-of-the-art equipment that is maintained following established maintenance schedules. Unique ATS accession numbers are assigned to all projects and samples, and on-site specimen storage areas are protected by a 24 hour security system. Personnel training in the GLP and QSR regulations is documented, and routine internal audits and inspections assure compliance with protocols, laboratory SOPs, and pertinent regulations. Please see our website at www.RnDSystems.com/go/AssayServices.

ISO Certification

R&D Systems maintains high standards in the design, development, and manufacture of reagents for the research community. Our quality management system is certified to ISO 9001:2008. In addition, the design and manufacture of our in vitro diagnostic ELISA products have been certified to ISO 13485:2003. ISO certification is achieved by subjective our internal quality management systems to review by an objective, independent third party on a periodic basis. To view a current copy of our certificate, please visit our website at www.RnDSystems.com/go/ISOcertificate.
**Assay Principles**

**Quantikine & Quantikine IVD Assay Principle:** Complete colorimetric ELISA kits for soluble or intracellular factors

**Step 1**

A microplate pre-coated with capture antibody is provided. Samples or standards are added and any analyte present is bound by the immobilized antibody. Unbound materials are washed away.

**Step 2**

An HRP-labeled antibody (detection antibody) is added and binds to the captured analyte. Unbound detection antibody is washed away.

**Step 3**

Tetramethylbenzidine (TMB) substrate solution is added to the wells and a blue color develops in proportion to the amount of analyte present in the sample. Color development is stopped turning the color in the wells to yellow. The absorbance of the color at 450 nm is measured, producing a signal that is proportional to the amount of analyte bound.
Quantikine HS (High Sensitivity) Assay Principle: Complete colorimetric ELISA kits capable of detection at femtogram levels of analyte

**Step 1**
A microplate pre-coated with capture antibody is provided. Samples or standards are added and any analyte present is bound by the immobilized antibody. Unbound materials are washed away.

**Step 2**
An alkaline phosphatase (AP)-labeled detection antibody is added and binds to the captured analyte. Unbound detection antibody is washed away.

**Step 3**
NADPH substrate solution is added. Plates are NOT washed.

**Step 4**
Amplifier solution is added and a red color develops in proportion to the amount of analyte present in the sample. Stop solution is added (color remains red) and the absorbance of the color at 490 nm is measured.
**Quantiglo Assay Principle:** Chemiluminescence-based ELISA kits exhibiting a wide dynamic range

**Step 1**
A microplate pre-coated with capture antibody is provided. Samples or standards are added and any analyte present is bound by the immobilized antibody. Unbound materials are washed away.

**Step 2**
An HRP-labeled detection antibody is added and binds to the captured analyte. Unbound detection antibody is washed away.

**Step 3**
Enhanced luminol substrate is added and light is produced in proportion to the amount of analyte present in the sample. A microplate luminometer is used to measure the intensity of light emitted.
**Fluorokine E Assay Principle:** Capture antibody-based fluorometric enzyme assays for the quantitation of active MMPs in serum, plasma, and/or cell culture supernates

**Step 1**

A black microplate is pre-coated with a protease-specific antibody. The sample is added allowing both pro- and active forms of the enzyme to bind to the immobilized antibody. Unbound proteases are washed away.

**Step 2**

A protease-specific peptide substrate (green & purple) is added. The substrate features a fluorophore (green) and quencher molecule (purple) on opposite sides of the prospective cleavage site.

**Step 3**

Active enzyme cleaves the peptide substrate between the fluorophore and the quencher molecules, increasing the distance between them. Energy from the fluorophore is now available as a fluorometric signal since the quencher is no longer close enough to absorb it. The resulting signal is directly proportional to the amount of active protease bound in the initial step.
Parameter Competitive Binding Assay Principle: Complete colorimetric kits for the quantitation of small molecule analytes

**Step 1**

A microplate pre-coated with the appropriate secondary antibody is provided. A primary antibody specific to the target analyte is added and bound by the immobilized secondary antibody. Unbound materials are washed away.

**Step 2**

The experimental sample containing the target analyte and an HRP-conjugated analyte analogue are added. Both have the capability of binding to the immobilized primary antibody-secondary antibody complex. Unbound analyte and competitor analyte are washed away.

**Step 3**

Tetramethylbenzidine (TMB) substrate solution is added to the wells and a blue color develops in proportion to the amount of HRP-conjugated competitor analyte bound to the immobilized primary antibody-secondary antibody complex. Color development is stopped turning the color in the wells to yellow. The absorbance of the color at 450 nm is measured, producing a signal that is inversely proportional to the concentration of analyte present in the sample.

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†The Creatinine Parameter Assay Kit (Catalog # KGE005) and the Total NO/Nitrite/Nitrate Parameter Kit (Catalog # KGE001) are not based on the competitive binding assay outlined. Please refer to the product specific data sheets for the appropriate protocols for these kits.

‡Some kits require an incubation of the primary antibody with either the antibody-coated microplate alone, or in combination with the sample containing the target analyte, prior to the addition of the HRP-conjugated competitor analyte. Other kits combine the primary antibody, sample, and HRP-conjugated competitor analyte in the wells in the first step. Please refer to the product specific data sheet for the appropriate protocol for each individual kit.
**Surveyor IC Assay Principle:** Complete microplate-based assays for measuring signal transduction and apoptosis-related molecules

**Step 1**

A microplate pre-coated with capture antibody is provided. Samples or standards are added and any analyte present is bound by the immobilized antibody. Unbound materials are washed away.

**Step 2**

A second biotinylated antibody (detection antibody) is added and binds to the captured analyte. Unbound detection antibody is washed away.

**Step 3**

Streptavidin-HRP is used to bind to the detection antibody. Unbound Streptavidin-HRP is washed away.

**Step 4**

Tetramethylbenzidine (TMB) substrate solution is added to the wells and a blue color develops in proportion to the amount of analyte present in the sample. Color development is stopped turning the color in the wells to yellow. The absorbance of the color at 450 nm is measured.
**Cell-Based ELISA Assay Principle:** Dual fluorescence assays to detect two proteins in whole cells within the same microplate well

**Step 1**
Cells are seeded into a 96-well plate, treated per the experimental protocol, fixed, permeabilized, blocked, and washed.

**Step 2**
Primary antibodies from two different host species are added. One is specific for the target protein and one is specific for a normalization protein. Unbound antibody is washed away.

**Step 3**
Two species-specific secondary antibodies, labeled with either horseradish peroxidase (HRP) or alkaline phosphatase (AP), are used to detect the primary antibodies. Unbound secondary antibodies are washed away.

**Step 4**
Two spectrally distinct fluorogenic substrates for HRP or AP are used to simultaneously detect both the target and normalization proteins in the same microplate well. Fluorescence is measured with an excitation of 540 nm and emission at 600 nm for the F1 substrate (HRP-specific substrate). A second reading is taken with an excitation of 360 nm and emission at 450 nm for the F2 substrate (AP-specific substrate). Fluorescence of the target protein can be adjusted to the normalization protein to account for well-to-well variations.
# ELISA Troubleshooting Guide

## Poor Precision

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incomplete washing of the wells</td>
<td>Ensure that the wash apparatus is working properly. Do not reduce wash volume, the number of wash steps, or skip soak times.</td>
</tr>
<tr>
<td>Contamination</td>
<td>Saliva or skin may contain the analyte. Wear mask and gloves.</td>
</tr>
<tr>
<td>Inadequate aspiration of the wells</td>
<td>Wells should appear empty after aspiration. Blot plate on a clean paper towel after the last wash. Do not allow the wells to overdry.</td>
</tr>
<tr>
<td>Inadequate mixing of reagents in the wells</td>
<td>Ensure adequate mixing of reagents in the wells.</td>
</tr>
<tr>
<td>Unequal volumes added to the wells</td>
<td>Check pipette function, recalibrate if necessary. Ensure that the pipette tips are securely attached. Use consistent pipetting technique.</td>
</tr>
<tr>
<td>Pipetting error</td>
<td>Repeat the assay. Pipette standards and samples into the side of the wells to avoid splashing. Always run standards and samples in duplicate.</td>
</tr>
<tr>
<td>Reused pipette tips or reagent reservoirs</td>
<td>Change pipette tips between each standard, sample, or reagent. Use separate reservoirs for each reagent.</td>
</tr>
<tr>
<td>Reused plate sealer</td>
<td>Use a new plate sealer for each incubation period as recommended in the kit insert.</td>
</tr>
</tbody>
</table>

## Inadequate Signal Development

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrect preparation of the substrate</td>
<td>Ensure that the correct volumes of substrate reagents are used and are mixed properly. If the substrate is lyophilized, reconstitute completely with the appropriate amount of diluent. Mix thoroughly and use within the time indicated.</td>
</tr>
<tr>
<td>Inadequate volume of substrate added to the wells</td>
<td>Check pipette function, recalibrate if necessary. Ensure that the pipette tips are securely attached. Use consistent pipetting technique.</td>
</tr>
<tr>
<td>Incorrect incubation times or temperatures</td>
<td>Adhere to the recommended incubation times and temperatures. Avoid incubating plates in areas where environmental conditions vary (e.g. under a vent or on a window sill). Time each plate individually to avoid over- or under-incubation.</td>
</tr>
<tr>
<td>Conjugate or substrate reagent failure</td>
<td>Check by mixing equal volumes of conjugate and substrate solution. Color should develop immediately. Store substrates in the dark prior to use.</td>
</tr>
<tr>
<td>Improper instrument settings</td>
<td>Ensure that the correct wavelength filters are used on the microplate reader. Ensure that the correct settings are used with the luminometer. Refer to the kit insert.</td>
</tr>
<tr>
<td>Read beyond the suggested reading window</td>
<td>Read within the time recommended in the kit insert.</td>
</tr>
<tr>
<td>No stop solution added</td>
<td>Follow the assay protocol in the kit insert.</td>
</tr>
</tbody>
</table>

## Data Reduction

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper data reduction method</td>
<td>Use the data reduction method recommended in the kit insert. Other reduction methods may give a less precise fit of the standard curve. If computer software is not available, plot the standard curve using log/log paper and apply regression analysis to the log transformation.</td>
</tr>
<tr>
<td>Standard curve not assayed</td>
<td>A separate standard curve must be run with each assay. The standard curve provided in the kit insert is for demonstration only and cannot be used to calculate results.</td>
</tr>
</tbody>
</table>
# ELISA Troubleshooting Guide continued

## Poor Standard Curve

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper standard curve preparation</td>
<td>Ensure that the appropriate Calibrator Diluent is used. Reconstitute with the volume specified in the kit insert. Avoid foaming when mixing or reconstituting and allow the standard to sit for the specified time before use. Ensure accurate completion of the dilution series.</td>
</tr>
<tr>
<td>Incomplete washing of the wells</td>
<td>Ensure that the wash apparatus is working properly. Do not reduce the wash volume, the number of wash steps, or skip soak times.</td>
</tr>
<tr>
<td>Inadequate aspiration of the wells</td>
<td>Wells should appear empty after aspiration. Blot plate on a clean paper towel after the last wash. Do not allow the wells to overdry.</td>
</tr>
<tr>
<td>Unequal volumes added to the wells</td>
<td>Check pipette function, recalibrate if necessary. Ensure that the pipette tips are securely attached. Use consistent pipetting technique.</td>
</tr>
<tr>
<td>Substrates prepared too early</td>
<td>Prepare substrate(s) within the time recommended in the kit insert.</td>
</tr>
<tr>
<td>Read beyond suggested reading window</td>
<td>Read within the time recommended in the kit insert.</td>
</tr>
<tr>
<td>Improper data reduction method</td>
<td>Use the data reduction method recommended in the kit insert. Other reduction methods may give a less precise fit of the standard curve.</td>
</tr>
<tr>
<td>Pipetting error</td>
<td>Repeat the assay. Always run standards and samples in duplicate.</td>
</tr>
</tbody>
</table>

## Unexpected Sample Values

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper collection or storage</td>
<td>Use the collection method recommended in the kit insert. If not assaying samples immediately, refer to the kit insert for storage instructions.</td>
</tr>
<tr>
<td>Improper sample preparation</td>
<td>Sample preparation methods have been tested for optimal performance. Adhere to the recommended sample preparation instructions. Ensure that the correct Calibrator Diluent is used.</td>
</tr>
</tbody>
</table>

## Drift

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interrupted assay set-up</td>
<td>Assay set-up should be continuous. Have all standards/samples prepared appropriately before commencement of the assay. Standards and samples should be added to the plate within 20 minutes unless indicated otherwise in the kit insert.</td>
</tr>
<tr>
<td>Incubation times and temperatures</td>
<td>Adhere to the recommended incubation times and temperatures. Avoid incubating plates in areas where environmental conditions vary (e.g. under a vent or window sill). Time each plate individually to avoid over- or under-incubation.</td>
</tr>
<tr>
<td>Reagents not at room temperature</td>
<td>Ensure that all reagents are at room temperature before pipetting into the wells unless otherwise instructed in the kit insert.</td>
</tr>
<tr>
<td>Incorrect luminometer settings</td>
<td>For chemiluminescent assays, read at ≤1.0 second/well. Reading at ≥2.0 seconds/well will produce a drift because of the time elapsed from the first wells read to the last wells read.</td>
</tr>
</tbody>
</table>

## Edge Effect

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uneven temperatures around the work surface</td>
<td>Avoid incubating plates in areas where environmental conditions vary (e.g. under a vent or a window sill).</td>
</tr>
<tr>
<td>Evaporation</td>
<td>Ensure the plate sealer is properly adhered.</td>
</tr>
<tr>
<td>Stacked plates</td>
<td>Do not stack the plates during incubation.</td>
</tr>
</tbody>
</table>
### Alphabetical Listing of ELISAs & References

#### α1-Acid Glycoprotein

**Quantikine Human α1-Acid Glycoprotein ELISA**
- **Catalog # DAGP00**
- **Sensitivity:** 0.538 ng/mL
- **Range:** 3.13-200 ng/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum, urine.

#### ACE/Angiotensin I Converting Enzyme/CD143

**Quantikine Human ACE ELISA**
- **Catalog # DACE00**
- **Sensitivity:** 0.051 ng/mL
- **Range:** 0.78-50 ng/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (heparin), saliva, serum.

- **Sample(s) Tested:** human plasma.

#### Activin A

**Quantikine Human/Mouse/Rat Activin A ELISA**
- **Catalog # DAC00B**
- **Sensitivity:** 7.85 pg/mL
- **Range:** 15.6-1000 pg/mL
- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), saliva, serum.

- **Sample(s) Tested:** mouse plasma.

- **Sample(s) Tested:** human follicular fluid.

- **Sample(s) Tested:** human plasma.

- **Sample(s) Tested:** human BM-MSC cell culture supernate.

- **Sample(s) Tested:** human CXCR3a or CXCR7 transfected CHO cells.

#### Adiponectin/Acrp30

**Quantikine Human Adiponectin/Acrp30 ELISA**
- **Catalog # DRP300**
- **Sensitivity:** 0.891 ng/mL
- **Range:** 3.9-250 ng/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.

- **Sample(s) Tested:** human BM-MSC cell culture supernate.

- **Sample(s) Tested:** human follicular fluid.

- **Sample(s) Tested:** human CXCR3a or CXCR7 transfected CHO cells.

- **Sample(s) Tested:** MDA-MB-435 and MCF-7 human breast cancer cell lysates.

- **Sample(s) Tested:** mouse serum.

- **Sample(s) Tested:** mouse plasma.

- **Sample(s) Tested:** human plasma.

- **Sample(s) Tested:** human CXCR3a or CXCR7 transfected CHO cells.

- **Sample(s) Tested:** mouse serum.

- **Sample(s) Tested:** 3T3-L1 mouse embryonic fibroblast cell culture supernate.

#### AgRP/Agouti-related Protein

**Quantikine Human AgRP ELISA**
- **Catalog # DAG00**
- **Sensitivity:** 2.68 pg/mL
- **Range:** 7.8-500 pg/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), urine.

#### Akt

**Cell-Based ELISA Human/Mouse/Rat Phospho-Akt (S473) Pan Specific**
- **Catalog # KCB887**
- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** whole cells.

- **Sample(s) Tested:** MDA-MB-435 and MCF-7 human breast cancer cell lysates.

**Surveyor IC Human/Mouse/Rat Phospho-Akt (S473) Pan Specific ELISA**
- **Catalog # SUV887**
- **Range:** 0.31-20 ng/mL
- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** cell lysate.

- **Sample(s) Tested:** human CXCR3a or CXCR7 transfected CHO cells.

- **Sample(s) Tested:** MDA-MB-435 and MCF-7 human breast cancer cell lysates.
cAMP

**Parameter Multi-species cAMP Assay**

Sensitivity: 8.57 pmol/mL
Range: 3.75-240 pmol/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (EDTA, heparin), saliva, serum, urine.


Sample(s) Tested: human psoriatic fibroblast cell culture supernate.

Angiogenin/ANG

**Quantikine Human ANG ELISA**

Catalog #: DANG00

Sensitivity: 6 pg/mL
Range: 78.1-5000 pg/mL
Sample Volume: 200 μL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human umbilical cord blood-derived cell culture supernate.


Sample(s) Tested: human plasma (citrate).


Sample(s) Tested: human serum.

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human saliva.

Angiopoietin-1

**Quantikine Human Angiopoietin-1 ELISA**

Catalog #: DANG10

Sensitivity: 10.3 pg/mL
Range: 62.5-4000 pg/mL
Sample Volume: 50 μL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (citrate, EDTA, heparin), platelet lysates, saliva, serum.


Sample(s) Tested: human umbilical vein endothelial cell culture supernate.


Sample(s) Tested: homogenized porcine myocardial tissue.


Sample(s) Tested: human sputum.

Angiopoietin-2

**Quantikine Human Angiopoietin-2 ELISA**

Catalog #: DANG20

Sensitivity: 21.3 pg/mL
Range: 46.9-3000 pg/mL
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.


Sample(s) Tested: cell culture supernates from M6363 and M6378 mouse mammary carcinoma cell lines transfected with human Ang-2.


Sample(s) Tested: human acute myeloid leukemia cell culture supernate.


Sample(s) Tested: MA-MEL-48a, MA-MEL-141b, MA-MEL-142, and A375 human melanoma cell culture supernates, human serum.


Sample(s) Tested: human plasma.

Angiopoietin-like 3

**Quantikine Mouse Angiopoietin-like 3 ELISA**

Catalog #: MANL30

Sensitivity: 9.62 pg/mL
Range: 62.5-4000 pg/mL
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

BAFF/BLyS/TNFSF13B

**Quantikine Human BAFF/BLyS/TNFSF13B ELISA**

Catalog #: DBLYS0*

Sensitivity: 6.67 pg/mL (cell culture supernate), 11.9 pg/mL (serum/plasma)
Range: 31.2-2000 pg/mL (cell culture supernate), 62.5-4000 pg/mL (serum/plasma)
Sample Volume: 75 μL (cell culture supernate), 50 μL (serum/plasma)

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human plasma (citrate).


Sample(s) Tested: human serum.


Sample(s) Tested: homogenized human nasal polyp and inferior turbinate tissue, human nasal lavage.

* Multipacks available 
For research use only. Not for use in diagnostic procedures unless otherwise indicated.
## BMP-4

**Quantikine Human BMP-4 ELISA**  
Catalog # DBP400  
**Sensitivity:** 3.68 pg/mL  
**Range:** 31.2-2000 pg/mL  
**Sample Volume:** 50 μL  
**Validated Sample Type(s):** bone tissue extract, cell culture supernate.

**Sample(s) Tested:**
- bone tissue extract, cell culture supernate


**Sample(s) Tested:**
- human mesenchymal stromal cell culture supernate


**Sample(s) Tested:**
- cell culture supernate from rabbit bone marrow-derived stromal cells transfected with human BMP-4.

## BMP-7

**Quantikine Human BMP-7 ELISA**  
Catalog # DBP700  
**Sensitivity:** 7.83 pg/mL  
**Range:** 31.2-2000 pg/mL  
**Sample Volume:** 50 μL  
**Validated Sample Type(s):** bone tissue extract, cell culture supernate, plasma (EDTA, heparin), serum, urine.


**Sample(s) Tested:**
- cell culture supernates from OCM-1 FRT human uveal melanoma cells overexpressing BMP-7.


**Sample(s) Tested:**
- MDA-231-B human breast cancer cell culture supernate


**Sample(s) Tested:**
- human periodontal ligament cell culture supernate


**Sample(s) Tested:**
- human plasma

## E-Cadherin

**Quantikine Human E-Cadherin ELISA**  
Catalog # DCADE0  
**Sensitivity:** 0.09 ng/mL  
**Range:** 0.31-20 ng/mL  
**Sample Volume:** 50 μL  
**Validated Sample Type(s):** cell culture supernate, plasma (heparin), saliva, serum, urine.


**Sample(s) Tested:**
- human serum

---

**BDNF**

**Quantikine Human BDNF ELISA**  
Catalog # DBD00*  
**Sensitivity:** 20 pg/mL  
**Range:** 62.5-4000 pg/mL  
**Sample Volume:** 50 μL  
**Validated Sample Type(s):** cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum.

Sung, S.Y. et al. (2008) *Validated Sample Type(s): cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum.*

**Sample(s) Tested:**
- cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum

Wong-Goodrich, S.J. et al. (2008) *Validated Sample Type(s): cell culture supernates from OCM-1 FRT human uveal melanoma cells.*

**Sample(s) Tested:**
- cell culture supernates from OCM-1 FRT human uveal melanoma cells

## BMP-2

**Quantikine Human/Mouse/Rat BMP-2 ELISA**  
Catalog # DBP200*  
**Sensitivity:** 29 pg/mL  
**Range:** 62.5-4000 pg/mL  
**Sample Volume:** 50 μL  
**Validated Sample Type(s):** bone tissue extract, cell culture supernate.


**Sample(s) Tested:**
- bone tissue extract, cell culture supernate

Koek, A. et al. (2008) *Validated Sample Type(s): bone tissue extract, cell culture supernate.*

**Sample(s) Tested:**
- bone tissue extract, cell culture supernate

## ELISA REFERENCE GUIDE
Carbonic Anhydrase IX/CA9

**Quantikine Human Carbonic Anhydrase IX/CA9 ELISA**  
Catalog # DCA900

- **Sensitivity:** 4.39 pg/mL  
- **Range:** 15.6-1000 pg/mL  
- **Sample Volume:** 100 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.


**Sample(s) Tested:** TE-2 and CHEK-1 human oesophageal carcinoma cell culture supernates.

β-Catenin

**Surveyor IC Human Total β-Catenin ELISA**  
Catalog # SUV1329

- **Range:** 312.5–20000 pg/mL  
- **Sample Volume:** 100 μL  
- **Validated Sample Type(s):** cell lysate.

Caspase-1/ICE

**Quantikine Human Caspase-1 ELISA**  
Catalog # DCA100

- **Sensitivity:** 1.24 pg/mL  
- **Range:** 6.25-400 pg/mL  
- **Sample Volume:** 100 μL  
- **Validated Sample Type(s):** cell culture supernate.


**Sample(s) Tested:** THP-1 human acute monocytic leukemia cell culture supernate.

Cathepsin B

**Quantikine Human Pro-Cathepsin B ELISA**  
Catalog # DCATB0

- **Sensitivity:** 0.079 ng/mL  
- **Range:** 0.156-10 ng/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, cell lysate, plasma (heparin), saliva, serum, urine.


**Sample(s) Tested:** human serum.

Cathepsin V

**Quantikine Human Cathepsin V ELISA**  
Catalog # DCATV0

- **Sensitivity:** 7.14 pg/mL  
- **Range:** 31.25-2000 pg/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum, urine.

CCL2/MCP-1

**Quantikine Canine CCL2/MCP-1 ELISA**  
Catalog # CACP00

- **Sensitivity:** 10.8 pg/mL  
- **Range:** 15.6-1000 pg/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.


**Sample(s) Tested:** homogenized human atherosclerotic plaque tissue.


**Sample(s) Tested:** Jurkat human acute T cell leukemia cell lysates.
### Quantikine Human CCL2/MCP-1 ELISA

**Catalog # DCP00***

**Sensitivity:** 5 pg/mL  
**Range:** 31.2-2000 pg/mL  
**Sample Volume:** 200 μL  

**Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

**Sample(s) Tested:** human plasma (citrate).


**Sample(s) Tested:** human urine, human proximal tubular epithelial cell culture supernate.


**Sample(s) Tested:** human exhaled breath concentrate.


**Sample(s) Tested:** rhesus macaque plasma, rhesus macaque CSF.

### Quantikine Mouse CCL2/JE/MCP-1 ELISA

**Catalog # MJE00***

**Sensitivity:** 2 pg/mL  
**Range:** 15.6-1000 pg/mL  
**Sample Volume:** 50 μL  

**Validated Sample Type(s):** cell culture supernate, serum.

Yang, S.J. et al. (2009) Inhibition of the chemokine (C-C motif) ligand 2/chemokine (C-C motif) receptor 2 pathway attenuates hyperglycaemia and inflammation in a mouse model of hepatic steatosis and lipaopothy. Diabetologia 52:972.

**Sample(s) Tested:** mouse serum, homogenized mouse liver tissue.


**Sample(s) Tested:** mouse astrocyte cell lysates and cell culture supernates, homogenized mouse spinal cord tissue.


**Sample(s) Tested:** mouse BALF.


**Sample(s) Tested:** mouse serum, mouse pleural fluid.

### Quantikine Human CCL3/MIP-1α ELISA

**Catalog # DMA00***

**Sensitivity:** 10 pg/mL  
**Range:** 31.2-1000 pg/mL (cell culture supernate), 46.9-1500 pg/mL (serum/plasma)  
**Sample Volume:** 200 μL  

**Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum.


**Sample(s) Tested:** human CD8+ T cell culture supernate.


**Sample(s) Tested:** human serum, human pleural effusion.


**Sample(s) Tested:** homogenized human lung, liver, and kidney tissue.


**Sample(s) Tested:** human BALF.


**Sample(s) Tested:** human peritoneal mesothelial cell culture supernate.

### Quantikine Human CCL3/MIP-1α ELISA

**Catalog # MMA00***

**Sensitivity:** 1.5 pg/mL  
**Range:** 4.7-300 pg/mL  
**Sample Volume:** 50 μL  

**Validated Sample Type(s):** cell culture supernate, serum.


**Sample(s) Tested:** mouse BALF.


**Sample(s) Tested:** homogenized mouse pancreas tissue.


**Sample(s) Tested:** mouse plasma (citrate).


**Sample(s) Tested:** mouse BALF.
### CCL4/MIP-1β

**Quantikine Human CCL4/MIP-1β ELISA**  
**Catalog # DMB00**

- **Sensitivity:** 4 pg/mL (cell culture supernate), 11 pg/mL (serum/plasma)  
- **Range:** 15.6-1000 pg/mL (cell culture supernate), 31.2-2000 pg/mL (serum/plasma)  
- **Sample Volume:** 200 μL (cell culture supernate), 150 μL (serum/plasma)  
- **Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum.

- **Sample(s) Tested:** human BALF, human synovial fluid.

- **Sample(s) Tested:** human nasopharyngeal secretions.

- **Sample(s) Tested:** mouse splenocyte cell culture supernate.

- **Sample Volume:** 50 μL  
  **Range:** 7.8-500 pg/mL  
  **Sensitivity:** 2 pg/mL

**Sample(s) Tested:** mouse serum, mouse BALF.

- **Sample(s) Tested:** homogenized mouse liver tissue, mouse serum.

- **Sample(s) Tested:** human urine.

### CCL5/RANTES

**Quantikine Human CCL5/RANTES ELISA**  
**Catalog # DRN00B**

- **Sensitivity:** 6.6 pg/mL  
- **Range:** 31.2-2000 pg/mL  
- **Sample Volume:** 100 μL

- **Validated Sample Type(s):** cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum, urine.

- **Sample(s) Tested:** human first trimester cytotrophoblast cell culture supernate.

- **Sample(s) Tested:** human fibroblast-like synoviocytes cell culture supernate.

- **Sample(s) Tested:** human urine.

**Sample(s) Tested:** mouse urinary fluid.

### Quantikine Mouse CCL4/MIP-1β ELISA  
**Catalog # MMB00**

- **Sensitivity:** 3 pg/mL  
- **Range:** 7.8-500 pg/mL  
- **Sample Volume:** 50 μL

**Sample(s) Tested:** mouse serum, mouse BALF.

- **Sample(s) Tested:** mouse peritoneal fluid.

### Quantikine Mouse CCL5/RANTES ELISA  
**Catalog # MMR00**

- **Sensitivity:** 2 pg/mL  
- **Range:** 7.8-500 pg/mL  
- **Sample Volume:** 50 μL

**Sample(s) Tested:** mouse BALF.

- **Sample(s) Tested:** homogenized mouse ear tissue.

- **Sample(s) Tested:** mouse urinary fluid.
CCL7/MCP-3

Quantikine Human CCL7/MCP-3 ELISA  
Catalog # DCC700
Sensitivity: 8.52 pg/mL  
Range: 15.6-1000 pg/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Sample(s) Tested:
- Human serum.


Sample(s) Tested: mouse BALF.


Sample(s) Tested: mouse conjunctival tissue and cell culture supernate.


Sample(s) Tested: mouse serum, mouse BALF.

CCL11/Eotaxin

Quantikine Human CCL11/Eotaxin ELISA  
Catalog # DTX00*
Sensitivity: 5 pg/mL  
Range: 15.6-1000 pg/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.

Sample(s) Tested:
- Human serum.


Sample(s) Tested: human BALF, human synovial fluid.


Sample(s) Tested: human nasal polyp tissue.


Sample(s) Tested: human serum.


Sample(s) Tested: human CSF.


Sample(s) Tested: human nasopharyngeal secretions.

Quantikine Mouse CCL11/Eotaxin ELISA  
Catalog # MME00
Sensitivity: 3 pg/mL  
Range: 15.6-1000 pg/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.


Sample(s) Tested: homogenized mouse muscle tissue.


Sample(s) Tested: mouse peritoneal lavage, mouse serum, homogenized mouse liver and spleen tissue.


Sample(s) Tested: mouse pleural effusion.

CCL12/MCP-5

Quantikine Mouse CCL12/MCP-5 ELISA  
Catalog # MCC120
Sensitivity: 2.1 pg/mL  
Range: 15.6-1000 pg/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: homogenized mouse muscle tissue.


Sample(s) Tested: mouse peritoneal lavage, mouse serum, homogenized mouse liver and spleen tissue.


Sample(s) Tested: mouse pleural effusion.

CCL17/TARC

Quantikine Human CCL17/TARC ELISA  
Catalog # DDN00*
Sensitivity: 7 pg/mL  
Range: 31.2-2000 pg/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human pleural fluid, human serum.


Sample(s) Tested: human serum.
**CCL17/TARC continued**

Olssen, A.M. et al. (2008) In vitro induction of a dendritic cell phenotype in primary human acute myelogenous leukemia (AML) blasts alters the chemokine release profile and increases the levels of T cell chemotactic CCL17 and CCL22. J. Interferon Cytokine Res. 28:297.

Sample(s) Tested: human acute myelogenous leukemia cell culture supernate.


Quantikine Mouse CCL17/TARC ELISA

Catalog # MCC170

Sensitivity: 5 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, serum).


Sample(s) Tested: mouse BALF.


Sample(s) Tested: homogenized mouse spleen tissue.


Sample(s) Tested: mouse serum.

**CCL20/MIP-3α**

Quantikine Human CCL20/MIP-3α ELISA

Catalog # DM3A00

Sensitivity: 0.87 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human synoviocytes cell culture supernate.


Sample(s) Tested: human urine.


Sample(s) Tested: human serum.


Sample(s) Tested: human keratinocytes cell culture supernate.


Sample(s) Tested: human plasma (heparin).

Quantikine Mouse CCL20/MIP-3α ELISA

Catalog # MCC200

Sensitivity: 0.49 pg/mL
Range: 3.9-250 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.


Sample(s) Tested: mouse BALF.


Sample(s) Tested: CT-26 mouse colon cancer cell culture supernate.

**CCL21/6Ckine**

Quantikine Human CCL21/6Ckine ELISA

Catalog # D6C00

Sensitivity: 33.5 pg/mL
Range: 78.1-5000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human serum, human lymphatic fluid.


Sample(s) Tested: human lymphatic endothelial cell, MCF10A non-tumorigenic breast cell, MCF-7 and MDA breast cancer cell culture supernates.

Haukeland, J.W. et al. (2006) Systemic inflammation in nonalcoholic fatty liver disease is characterized by elevated levels of CCL2. J. Hepatol. 44:1167.

Sample(s) Tested: human serum.

**CCL22/MDC**

Quantikine Human CCL22/MDC ELISA

Catalog # DMD00

Sensitivity: 62.5 pg/mL
Range: 125-4000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human serum, human pleural fluid.


Sample(s) Tested: THP-1 human acute monocytic leukemia cell culture supernate.


Sample(s) Tested: C8166, C91/PL, ILT8M2, TCL-Kan human HTLV-1 transformed T cell line, KOB, KKH1, ST1, and S04 human ATL-derived T cell culture supernates.

**Sample(s) Tested**: human plasma, human synovial fluid.

### CCL27/CTACK

**Quantikine Human CCL27/CTACK ELISA**

Catalog # DCC270

- **Sensitivity**: 4.68 pg/mL
- **Range**: 15.6-1000 pg/mL
- **Sample Volume**: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


**Sample(s) Tested**: human serum, human lymphatic fluid.


**Sample(s) Tested**: human lymphatic endothelial cell culture supernate.


**Sample(s) Tested**: human serum.

### CD14

**Quantikine Human Soluble CD14 ELISA**

Catalog # DC140

- **Sensitivity**: 125 pg/mL
- **Range**: 250-16,000 pg/mL
- **Sample Volume**: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


**Sample(s) Tested**: African Green Monkey plasma.


**Sample(s) Tested**: U937 human leukemic monocyte cell culture supernatant.


**Sample(s) Tested**: human serum, human milk.

### CD23/FcεRII

**Quantikine Human CD23/FcεRII ELISA**

Catalog # DCD230

- **Sensitivity**: 5.1 pg/mL
- **Range**: 31.2-2000 pg/mL
- **Sample Volume**: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

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**CCL24/Eotaxin-2/MPIF-2**

**Quantikine Human CCL24/Eotaxin-2 ELISA**

Catalog # DCC240B

- **Sensitivity**: 14.3 pg/mL
- **Range**: 78-5000 pg/mL
- **Sample Volume**: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Taka, E. et al. (2008) Post-transcriptional silencing of CCR3 downregulates IL-4 stimulated release of eotaxin-3 (CCL26) and other CCR3 ligands in alveolar type II cells. Cytokine 44:342.

**Sample(s) Tested**: A549 human alveolar epithelial cell culture supernate.

### CCL26/Eotaxin-3

**Quantikine Human CCL26/Eotaxin-3 ELISA**

Catalog # DCC260

- **Sensitivity**: 5.2 pg/mL
- **Range**: 7.8-500 pg/mL
- **Sample Volume**: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Taka, E. et al. (2008) Post-transcriptional silencing of CCR3 downregulates IL-4 stimulated release of eotaxin-3 (CCL26) and other CCR3 ligands in alveolar type II cells. Cytokine 44:342.

**Sample(s) Tested**: A549 human alveolar epithelial cell culture supernate and cell lysate.


**Sample(s) Tested**: human plasma (EDTA).


**Sample(s) Tested**: human plasma (heparin).
CD40 Ligand/TNFSF5

**Quantikine Human CD40 Ligand/TNFSF5 ELISA**

- **Catalog #** DCDL40
- **Sensitivity:** 10.1 pg/mL
- **Range:** 62.5-4000 pg/mL
- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.


**Sample(s) Tested:** human plasma (citrate).

Clusterin

**Quantikine Human Clusterin ELISA**

- **Catalog #** DCLU00
- **Sensitivity:** 1.05 ng/mL
- **Range:** 3.12-200 ng/mL
- **Sample Volume:** 50 μL
- **Validated Sample Types:** cell culture supernate, plasma (citrate, EDTA, heparin), serum.


**Sample(s) Tested:** ARPE-19 human retinal pigment epithelial cell culture supernate.

CNTF

**Quantikine Human CNTF ELISA**

- **Catalog #** DNT00
- **Sensitivity:** 8 pg/mL
- **Range:** 31.2-2000 pg/mL
- **Sample Volume:** 200 μL
- **Validated Sample Types:** cell culture supernate, plasma (citrate, EDTA, heparin), serum.


**Sample(s) Tested:** ARPE-19 human retinal pigment epithelial cell culture supernate.


**Sample(s) Tested:** ARPE-19 human retinal pigment epithelial cell culture supernate.


**Sample(s) Tested:** AF5 rat mesencephalic cell culture supernate.

Coagulation Factor III/Tissue Factor

**Quantikine Human Coagulation Factor III/Tissue Factor ELISA**

- **Catalog #** DCF300
- **Sensitivity:** 2.05 pg/mL
- **Range:** 7.8-500 pg/mL
- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), urine.


**Sample(s) Tested:** porcine mesenchymal stem cell, endomyocardial cell, bone marrow mononuclear cell lysates.
**Complement Factor D/Adipsin**

**Quantikine Human Complement Factor D ELISA**  
Catalog # DFD00

- Sensitivity: 0.025 ng/mL
- Range: 0.312-20 ng/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

**Corin**

**Quantikine Human Corin ELISA**  
Catalog # DCRN00

- Sensitivity: 23.7 pg/mL
- Range: 75-4800 pg/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenates.


**Sample(s) Tested:** human serum, human plasma.

**Cortisol**

**Parameter Multi-species Cortisol Assay**  
Catalog # KGE008*

- Sensitivity: 0.111 ng/mL
- Range: 0.156-10 ng/mL
- Sample Volume: 100 μL
- Validated Sample Type(s): cell culture supernate, saliva, serum, urine.


**Sample(s) Tested:** human airway smooth muscle cell lysates.

**C-Reactive Protein/CRP**

**Quantikine Human C-Reactive Protein ELISA**  
Catalog # DCRP00*

- Sensitivity: 0.022 ng/mL
- Range: 0.78-50 ng/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** human recombinant CRP.


**Sample(s) Tested:** human plasma.

**Creatinine**

**Parameter Multi-species Creatinine Assay**  
Catalog # KGE005

- Sensitivity: 0.07 mg/dL
- Range: 0.31-20 mg/dL
- Sample Volume: 50 μL
- Validated Sample Type(s): urine.


**Sample(s) Tested:** human urine.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** mouse urine.

**CREB**

**Cell-Based ELISA Human/Mouse/Rat Phospho-CREB (S133)**  
Catalog # KCB2510

- Sample Volume: 100 μL
- Validated Sample Type(s): whole cells.

**CX3CL1/Fractalkine**

**Quantikine Human CX3CL1/Fractalkine ELISA**  
Catalog # DCX310

- Sensitivity: 0.072 ng/mL
- Range: 0.156-10 ng/mL
- Sample Volume: 100 μL
- Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.


**Sample(s) Tested:** human umbilical vein endothelial cell culture supernate.

**Quantikine Mouse CX3CL1/Fractalkine ELISA**  
Catalog # MCX310

- Sensitivity: 0.32 ng/mL
- Range: 0.62-40 ng/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.


**Sample(s) Tested:** mouse peritoneal lavage.


**Sample(s) Tested:** homogenized mouse lung tissue.
**CXCL1/Fractalkine continued**


Sample(s) Tested: B16-F0 mouse melanoma cell culture supernatant.

### CXCL1/GRO/CX3CL1/Fractalkine

#### Quantikine Human CXCL1/GROα ELISA

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>DGR00*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity:</td>
<td>10 pg/mL</td>
</tr>
<tr>
<td>Range:</td>
<td>31.2-1000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>200 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernatant, plasma (citrate, EDTA, heparin), serum</td>
</tr>
</tbody>
</table>


Sample(s) Tested: human palmoplantar pustulosis wash fluid.


Sample(s) Tested: IMR-90 human lung fibroblast cell culture supernatant.


Sample(s) Tested: human plasma (EDTA).


Sample(s) Tested: human exhaled breath condensate.

#### Quantikine Mouse CXCL1/KC ELISA

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>MKC008*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity:</td>
<td>2 pg/mL</td>
</tr>
<tr>
<td>Range:</td>
<td>15.6-1000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>50 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernatant, serum</td>
</tr>
</tbody>
</table>


Sample(s) Tested: homogenized mouse kidney tissue.


Sample(s) Tested: homogenized mouse ear tissue.


Sample(s) Tested: mouse plasma (heparin), homogenized mouse mesenteric tissue.


Sample(s) Tested: homogenized mouse spleen tissue.


Sample(s) Tested: mouse BALF.

---

**Quantikine Rat CXCL1/CINC-1 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>RCN100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity:</td>
<td>1.3 pg/mL</td>
</tr>
<tr>
<td>Range:</td>
<td>7.8-500 pg/mL</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>50 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernatant, plasma (EDTA, serum)</td>
</tr>
</tbody>
</table>


Sample(s) Tested: rat BALF.


Sample(s) Tested: homogenized rat lung tissue.


Sample(s) Tested: rat lung perfusion.

---

**CXCL2/GROβ/MIP-2/CINC-3**

#### Quantikine Mouse CXCL2/MIP-2 ELISA

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>MM200*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity:</td>
<td>1.5 pg/mL</td>
</tr>
<tr>
<td>Range:</td>
<td>7.8-500 pg/mL</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>50 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernatant, plasma (EDTA)</td>
</tr>
</tbody>
</table>


Sample(s) Tested: mouse BALF.


Sample(s) Tested: mouse BALF.


Sample(s) Tested: homogenized mouse kidney tissue.


Sample(s) Tested: homogenized mouse skin tissue.


Sample(s) Tested: rat BALF.

---

**Quantikine Rat CXCL2/CINC-3 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>RCN300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity:</td>
<td>2.7 pg/mL</td>
</tr>
<tr>
<td>Range:</td>
<td>31.2-2000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>50 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernatant, plasma (EDTA, heparin)</td>
</tr>
</tbody>
</table>


Sample(s) Tested: rat BALF.
*Sample(s) Tested:* homogenized rat intestine tissue.

*Sample(s) Tested:* homogenized rat heart tissue.

**CXCL3/CINC-2**

Quantikine Rat CXCL3/CINC-2α/β ELISA  
*Catalog # RCN200*

- **Sensitivity:** 3.9 pg/mL
- **Range:** 6.25-400 pg/mL
- **Sample Volume:** 50 μL

*Validated Sample Type(s):* cell culture supernate, plasma (EDTA, heparin), serum.

*Sample(s) Tested:* homogenized rat lung tissue, rat BALF.

**CXCL5/ENA-78**

Quantikine Human CXCL5/ENA-78 ELISA  
*Catalog # DX000*

- **Sensitivity:** 15 pg/mL
- **Range:** 31.2-2000 pg/mL
- **Sample Volume:** 50 μL

*Validated Sample Type(s):* cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum.

*Sample(s) Tested:* human serum.

*Sample(s) Tested:* human synovioocytes cell culture supernate.

*Sample(s) Tested:* human plasma.

*Sample(s) Tested:* homogenized human synovial tissue.

**CXCL6/GCP-2**

Quantikine Human CXCL6/GCP-2 ELISA  
*Catalog # DGC00*

- **Sensitivity:** 8 pg/mL
- **Range:** 31.2-2000 pg/mL
- **Sample Volume:** 50 μL

*Validated Sample Type(s):* cell culture supernate, plasma (EDTA, heparin), serum.

*Sample(s) Tested:* human microvascular endothelial cell culture supernate.

Abe, Y. et al. (2007) L5, the most electronegative subfraction of plasma LDL, induces endothelial vascular cell adhesion molecule 1 and CXC chemokines, which mediate mononuclear leukocyte adhesion. Atherosclerosis 192:56.
*Sample(s) Tested:* human umbilical vein endothelial cell culture supernate.

*Sample(s) Tested:* human milk.

**CXCL8/IL-8**

Quantikine Canine CXCL8/IL-8 ELISA  
*Catalog # CA8000*

- **Sensitivity:** 4.31 pg/mL
- **Range:** 15.6-1000 pg/mL
- **Sample Volume:** 50 μL

*Validated Sample Type(s):* cell culture supernate, plasma (EDTA, heparin), serum.

Quantikine Human CXCL8/IL-8 ELISA  
*Catalog # D8000C*

- **Sensitivity:** 7.5 pg/mL
- **Range:** 31.2-2000 pg/mL
- **Sample Volume:** 50 μL

*Validated Sample Type(s):* cell culture supernate, plasma (citrate, EDTA, heparin), serum.

*Sample(s) Tested:* human peripheral blood mononuclear cell culture supernate.

*Sample(s) Tested:* human serum.

*Sample(s) Tested:* human plasma (EDTA).

*Sample(s) Tested:* novel human bronchial epithelial cell culture supernate.
**CXCL8/IL-8 continued**

**Quantikine Chemiluminescent**

**Human CXCL8/IL-8 ELISA**

Catalog # Q8000B

- **Sensitivity:** 0.97 pg/mL
- **Range:** 1.6–5,000 pg/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum.
- **Sample(s) Tested:** human exhaled breath condensate.
- **Sample(s) Tested:** human plasma.

**Quantikine Porcine CXCL8/IL-8 ELISA**

Catalog # P8000

- **Sensitivity:** 6.7 pg/mL
- **Range:** 62.5–4000 pg/mL
- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** cell culture supernate, serum.
- **Sample(s) Tested:** porcine lamina propria lymphocyte cell culture supernate.
- **Sample(s) Tested:** porcine serum, porcine BALF.
- **Sample(s) Tested:** porcine endothelial cell culture supernate.

**CXCL9/MIG**

**Quantikine Human CXCL9/MIG ELISA**

Catalog # DCX900

- **Sensitivity:** 11.3 pg/mL
- **Range:** 31.2–2000 pg/mL
- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.
- **Sample(s) Tested:** human plasma (EDTA).
- **Sample(s) Tested:** human acute myeloid leukemia cell culture supernate.
- **Sample(s) Tested:** human urine.
- **Sample(s) Tested:** human seminal plasma.

**Quantikine Mouse CXCL9/MIG ELISA**

Catalog # MCX900

- **Sensitivity:** 7.8 pg/mL
- **Range:** 31.2–2000 pg/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA), serum, tissue homogenate.
- **Sample(s) Tested:** homogenized mouse lung tissue.
- **Sample(s) Tested:** homogenized mouse cornea and iris tissue.
- **Sample(s) Tested:** mouse lymph node explant cell culture supernate, homogenized mouse eye tissue.

**CXCL10/IP-10/CRG-2**

**Quantikine Human CXCL10/IP-10 ELISA**

Catalog # DIP100

- **Sensitivity:** 4.46 pg/mL
- **Range:** 7.8–500 pg/mL
- **Sample Volume:** 100 μL cell culture supernate/saliva, 75 μL serum/plasma.
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), saliva, serum.
- **Sample(s) Tested:** acute myeloid leukemia cell culture supernate.
- **Sample(s) Tested:** human urine.
- **Sample(s) Tested:** human mesenchymal stem cell culture supernate.
- **Sample(s) Tested:** rhesus macaque plasma.
- **Sample(s) Tested:** human peritoneal dialysis effluent.

* Multipacks available

For research use only. Not for use in diagnostic procedures unless otherwise indicated.
Quantikine Mouse CXCL10/IP-10/CRG-2 ELISA Catalog # MCX100
Sensitivity: 4.2 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.
Sample(s) Tested: mouse macrophage cell culture supernate.
Sample(s) Tested: mouse serum, mouse osteoblast precursor cell culture supernate.
Sample(s) Tested: homogenized mouse spleen tissue.

CXCL11/I-TAC

Quantikine Human CXCL11/I-TAC ELISA Catalog # DCX110
Sensitivity: 39.7 pg/mL
Range: 62.5-4000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
Sample(s) Tested: human plasma (EDTA).
Sample(s) Tested: human acute myeloid leukemia cell culture supernate.
Sample(s) Tested: human seminal plasma.
Sample(s) Tested: human saliva.
Sample(s) Tested: human urine.

CXCL12/SDF-1α

Quantikine Human CXCL12/SDF-1α ELISA Catalog # DSA00
Sensitivity: 47 pg/mL
Range: 156-10,000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin).
Sample(s) Tested: human plasma, human sputum.
Sample(s) Tested: human plasma (EDTA).
Sample(s) Tested: human serum, human bone marrow.

Quantikine Mouse CXCL12/SDF-1α ELISA Catalog # MCX120
Sensitivity: 0.069 ng/mL
Range: 0.156-10 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, serum.
Sample(s) Tested: homogenized mouse heart tissue.
Sample(s) Tested: mouse tumor cell lysate, mouse plasma.
Sample(s) Tested: mouse plasma.

CXCL13/BLC/BCA-1

Quantikine Human CXCL13/BLC/BCA-1 ELISA Catalog # DCX130
Sensitivity: 3.97 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.
Sample(s) Tested: human plasma (EDTA).
Sample(s) Tested: human serum, homogenized human breast cancer tissue.
Sample(s) Tested: human CSF.
**CXCL13/BLC/BCA-1 continued**


*Sample(s) Tested:* human synovial fluid.

**Quantikine Mouse CXCL13/BLC/BCA-1 ELISA**

Catalog #: MCX130

<table>
<thead>
<tr>
<th>Sensitivity: 2.84 pg/mL</th>
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<tbody>
<tr>
<td>Range: 15.6-1000 pg/mL</td>
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</tbody>
</table>

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernatant, plasma (EDTA, heparin), serum.


*Sample(s) Tested:* homogenized mouse spleen tissue.

**CXCL16**

**Quantikine Human CXCL16 ELISA**

Catalog #: DCX160

<table>
<thead>
<tr>
<th>Sensitivity: 0.017 ng/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 0.156-10 ng/mL</td>
</tr>
</tbody>
</table>

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernatant, plasma (EDTA, heparin), serum.


*Sample(s) Tested:* human serum.


*Sample(s) Tested:* human serum, CAPAN-1, BxPC3, Colo357, and T3M4 human pancreatic cancer cell culture supernatants.


*Sample(s) Tested:* human schwannoma cell culture supernatant.

**Cystatin C**

**Quantikine Human Cystatin C ELISA**

Catalog #: DCTC0

<table>
<thead>
<tr>
<th>Sensitivity: 0.31 ng/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 0.625-20 ng/mL</td>
</tr>
</tbody>
</table>

Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernatant, plasma (EDTA, heparin), serum.


*Sample(s) Tested:* human serum.

**Cytochrome c**

**Quantikine Human Cytochrome c ELISA**

Catalog #: DCTC0

<table>
<thead>
<tr>
<th>Sensitivity: 0.31 ng/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 0.625-20 ng/mL</td>
</tr>
</tbody>
</table>

Sample Volume: 100 μL

Validated Sample Type(s): cell lysates.


*Sample(s) Tested:* SH-SYSY human neuroblastoma cell lysate.


*Sample(s) Tested:* Nalm-6 human leukemia pre-B cell lysate.


*Sample(s) Tested:* canine myoblast cell lysate.

**Quantikine Mouse/Rat Cytochrome c ELISA**

Catalog #: MCTC0

<table>
<thead>
<tr>
<th>Sensitivity: 0.8 ng/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 0.78-25 ng/mL</td>
</tr>
</tbody>
</table>

Sample Volume: 50 μL

Validated Sample Type(s): cell lysates.


*Sample(s) Tested:* mouse neuron cell lysate.


*Sample(s) Tested:* mouse liver mitochondria cell lysate.


*Sample(s) Tested:* mouse brain cell lysate.

**Dkk-1**

**Quantikine Human Dkk-1 ELISA**

Catalog #: DKK100

<table>
<thead>
<tr>
<th>Sensitivity: 35.6 pg/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 31.2-2000 pg/mL</td>
</tr>
</tbody>
</table>

Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernatant, plasma (EDTA, heparin), serum.

**Quantikine Mouse Dkk-1 ELISA**

Catalog #: MKK100

<table>
<thead>
<tr>
<th>Sensitivity: 29.6 pg/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 62.5-4000 pg/mL</td>
</tr>
</tbody>
</table>

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernatant, plasma (EDTA, heparin), serum.

* Multipacks available  
For research use only. Not for use in diagnostic procedures unless otherwise indicated.
### DPPIV/CD26

**Quantikine Human DPPIV/CD26 ELISA**  
Catalog # DC260

- **Sensitivity:** 0.072 ng/mL  
- **Range:** 0.31-20 ng/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.

### EGF

**Quantikine Human EGF ELISA**  
Catalog # DEG00

- **Sensitivity:** 0.7 pg/mL  
- **Range:** 3.9-250 pg/mL  
- **Sample Volume:** 200 μL  
- **Validated Sample Types:** cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum, urine.

Sample(s) Tested: human urine.

### EGF R/ErbB1

**Quantikine Human EGF R/ErbB1 ELISA**  
Catalog # DEGFR0

- **Sensitivity:** 0.036 ng/mL  
- **Range:** 0.313-20 ng/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** breast milk, cell culture supernate, plasma (EDTA, heparin), serum.

### Cell-Based ELISA Human Phospho-EGF R (Y1068)

**Catalog # KCB1095**

- **Sample Volume:** 100 μL  
- **Validated Sample Type(s):** whole cells.

Sample(s) Tested: human skin fibroblast cell lysates.

### EGF VEGF/PK1

**Quantikine Human EG-VEGF/PK1 ELISA**  
Catalog # DEGVF0

- **Sensitivity:** 5.3 pg/mL  
- **Range:** 7.8-500 pg/mL  
- **Sample Volume:** 100 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.

### Endocan

**Quantikine Mouse Endocan ELISA**  
Catalog # MEND00

- **Sensitivity:** 21.3 pg/mL  
- **Range:** 46.9-3000 pg/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.

### Endoglin/CD105

**Quantikine Human Endoglin/CD105 ELISA**  
Catalog # DNDG00

- **Sensitivity:** 0.03 ng/mL  
- **Range:** 0.156-10 ng/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin).

Sample(s) Tested: human plasma (citrate).

Sample(s) Tested: human serum.

Sample(s) Tested: human placental tissue explant cell culture supernate.
**Endostatin**

**Quantikine Human Endostatin ELISA**

Catalog # DNST0

- **Sensitivity:** 0.063 ng/mL
- **Range:** 0.31-10 ng/mL
- **Sample Volume:** 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.


*Sample(s) Tested:* cell culture supernate from goat mesenchymal stem cells transfected with human endostatin.


*Sample(s) Tested:* human plasma.


*Sample(s) Tested:* serum from mice expressing human EndoAngio, an endostatin-angiotatin fusion protein.


*Sample(s) Tested:* homogenized human tumor tissue.

**EPCR**

**Quantikine Human EPCR ELISA**

Catalog # DEPCR0

- **Sensitivity:** 0.282 ng/mL
- **Range:** 0.625-40 ng/mL
- **Sample Volume:** 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

**ErbB2/Her2**

**Cell-Based ELISA Human Phospho-ErbB2 (Y1196)**

Catalog # KCB4438

- **Sample Volume:** 100 μL
- Validated Sample Type(s): whole cells.

**ErbB3/Her3**

**Cell-Based ELISA Human Phospho-ErbB3 (Y1262)**

Catalog # KCB5677

- **Sample Volume:** 100 μL
- Validated Sample Type(s): whole cells.
ERK

**Cell-Based ELISA Human/Mouse/Rat**

- **Phospha-ERK1 (T202/Y204)/ERK2 (T185/Y187) ELISA**
  - Catalog #: KCB1018
  - Sample Volume: 100 µL
  - Validated Sample Type(s): whole cells.
  - **Sample(s) Tested:** human CXCR3a or CXCR7 transfected CHO cells.

- **Surveyor IC Human/Mouse/Rat**
  - **Phospha-ERK1 (T202/Y204)/ERK2 (T185/Y187) ELISA**
    - Catalog #: SUV1018
    - Range: 312-20,000 pg/mL
    - Sample Volume: 100 µL
    - Validated Sample Type(s): cell lysate.
    - **Sample(s) Tested:** cell lysates from CHO-K1, HEK293, and OK human mineral corticoid transsiented cells.

  - **Surveyor IC Human/Mouse/Rat**
    - **Phospha-ERK2 (T185/Y187) ELISA**
      - Catalog #: SUV1483
      - Range: 0.19-12 ng/mL
      - Sample Volume: 100 µL
      - Validated Sample Type(s): cell lysate.
      - **Sample(s) Tested:** homogenized rat artery tissue.
      - **Sample(s) Tested:** human melanoma cell lysate.
      - **Sample(s) Tested:** homogenized rat aorta tissue.

**Erythropoietin/Epo**

- **Quantikine IVD Human Epo ELISA**
  - Catalog #: DEP00
  - Sensitivity: 0.6 mIU/mL
  - Range: 2.5-200 mIU/mL
  - Sample Volume: 100 µL
  - Validated Sample Type(s): serum, plasma (EDTA).
  - **Sample(s) Tested:** human serum.

  - **Quantikine Mouse/Rat Epo ELISA**
    - Catalog #: MEPO0
    - Sensitivity: 46.9 pg/mL, mouse, 21.7 pg/mL rat
    - Range: 47-3000 pg/mL
    - Sample Volume: 50 µL
    - Validated Sample Type(s): cell culture supernate, mouse plasma (heparin), rat plasma (EDTA, heparin), serum, mouse tissue homogenate.
    - **Sample(s) Tested:** mouse serum.
    - **Sample(s) Tested:** homogenized mouse eye, kidney, and liver tissues.
    - **Sample(s) Tested:** mouse plasma (heparin).
    - **Sample(s) Tested:** mouse serum.
    - **Sample(s) Tested:** rat serum.

**Fas/TNFRSF6/CD95**

- **Quantikine Human Soluble Fas/TNFRSF6/CD95 ELISA**
  - Catalog #: DFS00
  - Sensitivity: 20 pg/mL
  - Range: 31.2-2000 pg/mL
  - Sample Volume: 100 µL
  - Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.
  - **Sample(s) Tested:** human plasma (EDTA).
**Fas/TNFSF6/CD95 continued**


Sample(s) Tested: human seminal plasma.


Sample(s) Tested: human urine, TCC-SUP and T24 human bladder cancer cell culture supernates and lysates.

**Fas Ligand/TNFSF6**

Quantikine Human Fas Ligand/TNFSF6 ELISA

Catalog # DFL00

Sensitivity: 8.05 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (EDTA, heparin), serum.


Sample(s) Tested: homogenized mouse lung tissue.


Sample(s) Tested: human blister fluid.


Sample(s) Tested: human mesenchymal stromal cell culture supernate.


Sample(s) Tested: human plasma (EDTA).

Quantikine Mouse Fas Ligand/TNFSF6 ELISA

Catalog # MFL00

Sensitivity: 3.9 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: homogenized mouse lung tissue.


Sample(s) Tested: mouse serum.


Sample(s) Tested: mouse BALF.


Sample(s) Tested: Neuro-2a mouse neuroblastoma cell culture supernate.

**FABP1/L-FABP**

Human FABP1/L-FABP ELISA

Catalog # Z-001

Sensitivity: 3 ng/mL

Range: 6.25-400 ng/mL

Sample Volume: 50 μL

Validated Sample Type(s): urine.


Sample(s) Tested: human L-FABP, transgenic mouse urine and homogenized kidney tissue.

**α-Fetoprotein/AFP**

Quantikine Human α-Fetoprotein ELISA

Catalog # DAFP00

Sensitivity: 0.046 ng/mL

Range: 0.312-20 ng/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human serum.


Sample(s) Tested: human serum.

**FGF acidic**

Quantikine Human FGF acidic ELISA

Catalog # DFA00B

Sensitivity: 3.9 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μL

Validated Sample Type(s): urine.


Sample(s) Tested: homogenized human iliac crest and reaming debris tissue, human plasma.


Sample(s) Tested: BEAS-2B human airway epithelial cell culture supernate.


Sample(s) Tested: human plasma (heparin).
**FGF basic**

**Quantikine Human FGF basic ELISA**
Catalog # DFB50

- Sensitivity: 3 pg/mL
- Range: 10-640 pg/mL
- Sample Volume: 100 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


**Sample(s) Tested:** human umbilical vein endothelial cell and human mammary endothelial cell culture supernates.


**Sample(s) Tested:** porcine endothelial cell culture supernate.


**Sample(s) Tested:** homogenized rat hippocampal tissue.


**Sample(s) Tested:** rat aqueous humor.

Lu, J. et al. (2007) Electronegative LDL impairs vascular endothelial cell integrity in diabetes by disrupting fibroblast growth factor 2 (FGF2) autoregulation. Diabetes 57:158.

**Sample(s) Tested:** bovine aortic endothelial cell culture supernate.

**Quantikine HS Human FGF basic ELISA**
Catalog # HSB00D

- Sensitivity: 0.07 pg/mL
- Range: 0.313-20 pg/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): plasma (citrate, EDTA), serum, urine.


**Sample(s) Tested:** human plasma, human platelet-poor plasma, human platelet concentrate.


**Sample(s) Tested:** mouse keratinocyte cell culture supernate.


**Sample(s) Tested:** human urine, human plasma (citrate), human peripheral blood mononuclear cell culture supernate.


**Sample(s) Tested:** rat pituitary cell culture supernate.


**Sample(s) Tested:** human peritoneal fluid, human serum.

**FGF-19**

**Quantikine Human FGF-19 ELISA**
Catalog # DF1900

- Sensitivity: 3.35 pg/mL
- Range: 15.6-1000 pg/mL
- Sample Volume: 100 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


**Sample(s) Tested:** human hepatocyte cell culture supernate.

**FGF-21**

**Quantikine Human FGF-21 ELISA**
Catalog # DF2100

- Sensitivity: 8.69 pg/mL
- Range: 31.3-2000 pg/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

**Quantikine Mouse FGF-21 ELISA**
Catalog # MF2100

- Sensitivity: 13.4 pg/mL
- Range: 31.3-2000 pg/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

**Flt-3 Ligand**

**Quantikine Human Flt-3 Ligand ELISA**
Catalog # DFK00

- Sensitivity: 7 pg/mL
- Range: 15.6-1000 pg/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


**Sample(s) Tested:** human acute myelogenous leukemia blast cell culture supernate.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** human dendritic cell and plasmacytoid dendritic cell culture supernates, human serum, and homogenized human brain tissue.

**Quantikine Mouse Flt-3 Ligand ELISA**
Catalog # MFK00

- Sensitivity: 5 pg/mL
- Range: 31.2-2000 pg/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): cell culture supernate, mouse serum, rat serum.


**Sample(s) Tested:** mouse serum.
**Fit-3 Ligand continued**


**Sample(s) Tested:** cell culture supernate from HEK293 human embryonic kidney cells transfected with mouse Flt-3 ligand.


**Sample(s) Tested:** rat dendritic cell and plasmacytoid dendritic cell culture supernates, rat serum, homogenized rat brain tissue.

**Follistatin**

**Quantikine Human Follistatin ELISA**

**Catalog #: DFN00**

Sensitivity: 83 pg/mL

Range: 250-16,000 pg/mL

Sample Volume: 100 μL

**Validated Sample Type(s):** cell culture supernate, follicular fluid, plasma (EDTA), serum.

Weigert, J. et al. (2009) Adiponectin upregulates monocyte activin A but systemic levels are not altered in obesity or type 2 diabetes. Cytokine 45:86.

**Sample(s) Tested:** human monocyte cell culture supernate.


**Sample(s) Tested:** human osteoblast cell culture supernate.


**Sample(s) Tested:** mouse serum.


**Sample(s) Tested:** rat serum.

**FRS2**

**Cell-based ELISA Human/Mouse/Rat**

**Phospho-FRS2 (Y436)**

**Catalog #: KCB5126**

Sample Volume: 100 μL

**Validated Sample Type(s):** whole cells.

**Galectin-3**

**Quantikine Human Galectin-3 ELISA**

**Catalog #: DGAL30**

Sensitivity: 0.085 ng/mL

Range: 0.313-10 ng/mL

Sample Volume: 50 μL

**Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.

**Gas6**

**Quantikine Human Gas6 ELISA**

**Catalog #: DGAS60**

Sensitivity: 7.7 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 100 μL

**Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum, urine.

**G-CSF**

**Quantikine Human G-CSF ELISA**

**Catalog #: DCSS0**

Sensitivity: 20 pg/mL

Range: 39-2500 pg/mL

Sample Volume: 100 μL

**Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum.


**Sample(s) Tested:** human peripheral blood mononuclear cell culture supernate.


**Sample(s) Tested:** human plasma, human sputum.


**Sample(s) Tested:** human nasal lavage.


**Sample(s) Tested:** human plasma (heparin).

**Quantikine HS Human G-CSF ELISA**

**Catalog #: HSTCS0**

Sensitivity: 4.62 pg/mL

Range: 4.69-300 pg/mL

Sample Volume: 100 μL

**Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum.

**Quantikine Mouse G-CSF ELISA**

**Catalog #: MCS00**

Sensitivity: 5 pg/mL

Range: 14.1-900 pg/mL

Sample Volume: 50 μL

**Validated Sample Type(s):** cell culture supernate, serum.


**Sample(s) Tested:** mouse plasma (heparin).


**Sample(s) Tested:** mouse lung epithelial lining fluid.

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**GDF-15**

**Quantikine Human GDF-15 ELISA**

- **Catalog # DGD150**
- **Sensitivity:** 4.4 pg/mL
- **Range:** 23.4-1500 pg/mL
- **Sample Volume:** 50 μL
- **Sample(s) Tested:** human plasma.

**GM-CSF**

**Quantikine Human GM-CSF ELISA**

- **Catalog # DGM00**
- **Sensitivity:** 3 pg/mL
- **Range:** 7.8-500 pg/mL
- **Sample Volume:** 100 μL
- **Sample(s) Tested:** human peripheral blood mononuclear cell culture supernate.

**Quantikine HS Human GM-CSF ELISA**

- **Catalog # HSGM0**
- **Sensitivity:** 0.26 pg/mL
- **Range:** 1-64 pg/mL (serum/plasma), 0.5-32 pg/mL (urine)
- **Sample Volume:** 150 μL (serum/plasma), 200 μL (urine)
- **Sample(s) Tested:** human plasma.

**Parameter Multi-species cGMP Assay**

- **Catalog # KGE003**
- **Sensitivity:** 3.06 pmol/L
- **Range:** 2.1-500 pmol/L
- **Sample Volume:** 100 μL
- **Sample(s) Tested:** human urine.

**Quantikine Mouse GM-CSF ELISA**

- **Catalog # MGM00**
- **Sensitivity:** 5.8 pg/mL
- **Range:** 7.8-500 pg/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, serum.

**Quantikine Rat GM-CSF ELISA**

- **Catalog # RGM00**
- **Sensitivity:** 2.1 pg/mL
- **Range:** 15.6-1000 pg/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, serum.
gp130

**Quantikine Human Soluble gp130 ELISA**

Catalog # DGP00

*Sensitivity: 0.05 ng/mL (cell culture supernate), 0.08 ng/mL (serum/plasma)*

*Range: 0.125-8 ng/mL (cell culture supernate), 0.25-16 ng/mL (serum/plasma)*

*Sample Volume: 100 μL*

*Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.*


*Sample(s) Tested: human plasma.*


*Sample(s) Tested: human serum, human synovial fluid.*


*Sample(s) Tested: human serum.*

Growth Hormone

**Quantikine Human Growth Hormone ELISA**

Catalog # DGH00

*Sensitivity: 7.18 pg/mL*

*Range: 25-1600 pg/mL*

*Sample Volume: 50 μL*

*Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.*


*Sample(s) Tested: human serum.*

HGF

**Quantikine Human HGF ELISA**

Catalog # DHG00

*Sensitivity: 40 pg/mL*

*Range: 125-8000 pg/mL*

*Sample Volume: 50 μL*

*Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.*


*Sample(s) Tested: homogenized human normal and cancerous breast tissue.*


*Sample(s) Tested: human serum.*

Hatfield, K.J. *et al.* (2007) Release of angiopoietin-1 by primary human acute myelogenous leukemia cells is associated with mutations of nucleophosmin, increased by bone marrow stromal cells and possibly antagonized by high systemic angiopoietin-2 levels. *Leukemia* **22**:287.

*Sample(s) Tested: human acute myelogenous leukemia cell culture supernate.*

HGF R

**Cell-Based ELISA Human Phospho-HGF R/c-Met (Y1234/Y1235)**

Catalog # KCB2480

*Sample Volume: 100 μL*

*Validated Sample Type(s): whole cells.*

HIF-1α

**Cell-Based ELISA Human/Mouse Total HIF-1α**

Catalog # KCB1935

*Sample Volume: 100 μL*

*Validated Sample Type(s): whole cells.*

**Surveyor IC Human/Mouse Total HIF-1α ELISA**

Catalog # SUV1935

*Range: 125-8000 pg/mL*

*Sample Volume: 100 μL*

*Validated Sample Type(s): cell lysate.*


*Sample(s) Tested: mouse bone marrow stem cell lysate.*

Histone H2AX

**Cell-Based ELISA Human/Mouse/Rat Phospho-Histone H2AX (S139)**

Catalog # KCB2288

*Sample Volume: 100 μL*

*Validated Sample Type(s): whole cells.*
HSP27

Cell-Based ELISA Human/Mouse Phospho-HSP27 (578/S82)  
Catalog # KCB2314
Sample Volume: 100 µL  
Validated Sample Type(s): whole cells.

Surveyor IC Human/Mouse/Rat Phospho-HSP27 (578/S82) ELISA  
Catalog # SUV2314
Range: 62.5-4000 pg/mL  
Sample Volume: 100 µL  
Validated Sample Type(s): cell lysate.

HSP70

Cell-Based ELISA Human/Mouse Total HSP70  
Catalog # KCB1663
Sample Volume: 100 µL  
Validated Sample Type(s): whole cells.

Surveyor IC Human/Mouse/Rat Total HSP70 ELISA  
Catalog # SUV1663
Range: 156-10,000 pg/mL  
Sample Volume: 100 µL  
Validated Sample Type(s): cell lysate.

ICAM-1/CD54

Quantikine Human Soluble ICAM-1/CD54 ELISA  
Catalog # DCD540*
Sensitivity: 0.254 ng/mL  
Range: 1.56-50 ng/mL  
Sample Volume: 100 µL  
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sample(s) Tested: human plasma (EDTA).

Sample(s) Tested: human plasma (EDTA).

Sample(s) Tested: human serum.

Quantikine Mouse Soluble ICAM-1/CD54 ELISA  
Catalog # MIC100
Sensitivity: 0.057 ng/mL  
Range: 0.31-20 ng/mL  
Sample Volume: 50 µL  
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Sample(s) Tested: homogenized mouse ear tissue.

Sample(s) Tested: mouse plasma (EDTA).

Sample(s) Tested: b-End 3 mouse brain-derived capillary endothelial cell culture supernate, homogenized mouse RPE-choroid complex tissue.

Quantikine Rat Soluble ICAM-1/CD54 ELISA  
Catalog # RIC100
Sensitivity: 4.1 pg/mL  
Range: 31.2-2000 pg/mL  
Sample Volume: 50 µL  
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Sample(s) Tested: rat retina cell lysate.

Sample(s) Tested: rat serum.

Sample(s) Tested: rat plasma (EDTA).

IFN-α

Human IFN-α ELISA  
Catalog # 41100-1*
Sensitivity: 12.5 pg/mL  
Range: 12.5-500 pg/mL (high sensitivity), 156-5000 pg/mL (extended range)  
Sample Volume: 100 µL  
Validated Sample Type(s): cell culture supernate.

Sample(s) Tested: human natural killer cell culture supernate.

Sample(s) Tested: human plasma.

Sample(s) Tested: rhesus macaque peripheral blood mononuclear cell culture supernate.
**IFN-α continued**

**Human IFN-α ELISA**
- Catalog #: 41110-1*
- Sensitivity: 12.5 pg/mL
- Range: 12.5-500 pg/mL (high sensitivity), 156-5000 pg/mL (extended range)
- Sample Volume: 100 μL
- Validated Sample Type(s): serum.


**Human IFN-α Multi-Subtype ELISA**
- Catalog #: 41105-1*
- Sensitivity: 12.5 pg/mL
- Range: 12.5-500 pg/mL (high sensitivity), 156-5000 pg/mL (extended range)
- Sample Volume: 100 μL
- Validated Sample Type(s): cell culture supernate.

Killian, M.S. et al. (2006) Similar changes in plasmacytoid dendritic cell and CD4 T cell counts during primary HIV-1 infection and treatment. AIDS 20:1247.

**Mouse IFN-α ELISA**
- Catalog #: 42100-1
- Sensitivity: 12.5 pg/mL
- Range: 12.5-500 pg/mL
- Sample Volume: 100 μL
- Validated Sample Type(s): cell culture supernate.


**Human IFN-β ELISA**
- Catalog #: 41410-1*
- Sensitivity: 25 pg/mL
- Range: 25-2000 pg/mL
- Sample Volume: 100 μL
- Validated Sample Type(s): cell culture supernate.


**Mouse IFN-β ELISA**
- Catalog #: 42400-1
- Sensitivity: 15.5 pg/mL
- Range: 15.6-1000 pg/mL
- Sample Volume: 100 μL
- Validated Sample Type(s): cell culture supernate, serum.


**Quantikine Canine IFN-γ ELISA**
- Catalog #: CAIF00
- Sensitivity: 60 pg/mL
- Range: 62.5-4000 pg/mL
- Sample Volume: 50 μL
- Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


**Human IFN-γ ELISA**
- Catalog #: 41000-1
- Sensitivity: 25 pg/mL
- Range: 25-2000 pg/mL
- Sample Volume: 100 μL
- Validated Sample Type(s): cell culture supernate.


**Sample(s) Tested:**
- Human interferon-β ELISA: human interferon-β ELISA
- Mouse interferon-β ELISA: mouse interferon-β ELISA
- Quantikine Canine interferon-γ ELISA: canine interferon-γ ELISA
- Human interferon-γ ELISA: human interferon-γ ELISA

* Multipacks available
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Sample Volume: 100 μL
Range: 39-2500 pg/mL
Sensitivity: 11.2 pg/mL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: mouse peritoneal exudate cell culture supernate, mouse serum, mouse peritoneal lavage.


Sample(s) Tested: mouse cardiomyocyte cell culture supernate.


Sample(s) Tested: mouse CD4+ and CD8+ T cell culture supernates.

Quantikine Porcine IFN-γ ELISA
Catalog # PIF00

Sensitivity: 11.2 pg/mL
Range: 39-2500 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), heparin), serum.


Sample(s) Tested: porcine lamina propria lymphocyte cell culture supernate.


Sample(s) Tested: porcine plasma.


Sample(s) Tested: porcine aortic endothelial cell culture supernate.


Sample(s) Tested: porcine serum.

Quantikine Human IFN-γ ELISA
Catalog # DIF00*

Sensitivity: 8 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: human peripheral NK, and uterine CD56+CD3 NK cell culture supernates.


Sample(s) Tested: human BALF, homogenized rat lung tissue.


Sample(s) Tested: rat serum.

Quantikine Rat IFN-γ ELISA
Catalog # RIF00*

Sensitivity: 10 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, serum.


Sample(s) Tested: rat BALF, homogenized rat lung tissue.


Sample(s) Tested: rat serum.

Human IFN-γ ELISA
Catalog # 41395-1

Sensitivity: 5 pg/mL
Range: 5-300 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

IGF-I

Quantikine Human IGF-I ELISA
Catalog # DG100*

Sensitivity: 0.056 ng/mL
Range: 0.094-6 ng/mL
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: A2780 human ovarian cancer cell culture supernate.


Sample(s) Tested: human fetal neuroepithelial cell culture supernate.
IGF-I continued


Sample(s) Tested: human serum.


Sample(s) Tested: homogenized rat hippocampal tissue.

Asimakopoulos, B. et al. (2007) The levels of steroid hormones and cytokines in individual follicles are not associated with the fertilization outcome after intracytoplasmic sperm injection. Fertil. Steril. 90:60.

Sample(s) Tested: human follicular fluid.

Quantikine Mouse/Rat IGF-I ELISA

Catalog #: MG100*

Sensitivity: 8.4 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenates.


Sample(s) Tested: homogenized mouse hippocampal tissue.


Sample(s) Tested: mouse serum.


Sample(s) Tested: homogenized mouse liver tissue, mouse serum.


Sample(s) Tested: human BALF


Sample(s) Tested: rat plasma (EDTA).

IGFBP-3

Quantikine Human IGFBP-3 ELISA

Catalog #: DGB300*

Sensitivity: 0.14 ng/mL

Range: 0.781-50 ng/mL

Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human plasma (heparin).


Sample(s) Tested: AsPC-1 human pancreatic cancer cell culture supernate.


Sample(s) Tested: human serum.


Sample(s) Tested: human follicular fluid.

Quantikine Mouse IGFBP-3 ELISA

Catalog #: MGB300

Sensitivity: 16 pg/mL

Range: 78.1-5000 pg/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA).

IL-1α/IL-1β

Cell-Based ELISA Human Total IL-1α/IL-1β

Catalog #: KCB4299

Sample Volume: 100 μL

Validated Sample Type(s): whole cells.

IL-1α/IL-1β

Quantikine Human IL-1α/IL-1β ELISA

Catalog #: DLAS0*

Sensitivity: 1 pg/mL

Range: 3.9-250 pg/mL

Sample Volume: 200 μL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: HT29 human colon adenocarcinoma cell culture supernate.


Sample(s) Tested: human wound secretion.


Sample(s) Tested: human cardiac fibroblast cell culture supernate.


Sample(s) Tested: bovine smooth muscle cell culture supernate.

Quantikine Mouse IL-1α/IL-1β ELISA

Catalog #: MLA00

Sensitivity: 2.5 pg/mL

Range: 4.7-300 pg/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, serum.


Sample(s) Tested: mouse plasma.

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Sample(s) Tested: homogenized mouse lung and eye tissue.


Sample(s) Tested: mouse platelet cell lysates, mouse plasma (citrate).

Quantikine Rat IL-1α/IL-1F1 ELISA
Catalog # RRA00

Sensitivity: 4.12 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: rat Sertoli cell lysate, RIPA extracts, & cell culture supernate.

IL-1β/IL-1F2

Quantikine Human IL-1β/IL-1F2 ELISA
Catalog # DLB50*

Sensitivity: 1 pg/mL
Range: 3.9-250 pg/mL
Sample Volume: 200 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human plasma (citrate).


Sample(s) Tested: human monocyte cell culture supernate.


Sample(s) Tested: homogenized human nasal polytissue.


Sample(s) Tested: human serum.


Sample(s) Tested: baboon plasma (EDTA).

Quantikine Human Pro-IL-1β/IL-1F2 ELISA
Catalog # DLBP00

Sensitivity: 7.2 pg/mL (cell culture supernate), 8.9 pg/mL (serum/plasma)
Range: 23.4-1500 pg/mL (cell culture supernate), 31.2-2000 pg/mL (serum/plasma)
Sample Volume: 200 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: THP-1 human acute monocytic leukemia cell culture supernate.


Sample(s) Tested: mouse peritoneal fluid.


Sample(s) Tested: human macrophage cell lysate.


Sample(s) Tested: human CSF, human serum.

Quantikine HS Human IL-1β/IL-1F2 ELISA
Catalog # HSLB00C*

Sensitivity: 0.14 pg/mL
Range: 0.125-8 pg/mL
Sample Volume: 150 μL
Validated Sample Type(s): plasma (EDTA, heparin), serum.


Sample(s) Tested: human plasma (EDTA).


Sample(s) Tested: human serum.

QuantiGlo Chemiluminescent Human IL-1α/IL-1F2 ELISA
Catalog # QLB00B

Sensitivity: 0.55 pg/mL
Range: 1.4-1000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human umbilical vein endothelial cell and THP-1 human acute monocytic leukemia cell lysates.


Sample(s) Tested: THP-1 human acute monocytic leukemia cell culture supernate.

Quantikine Mouse IL-1β/IL-1F2 ELISA
Catalog # MLB00B*

Sensitivity: 3 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, serum.


Sample(s) Tested: RAW264.7 mouse macrophage cell culture supernate.


Sample(s) Tested: mouse peritoneal exudate cell culture supernate, mouse serum, mouse peritoneal lavage.


Sample(s) Tested: mouse serum.
IL-1β/IL-1F2 continued


Sample(s) Tested: homogenized mouse cornea tissue.

Quantikine Porcine IL-1β/IL-1F2 ELISA

Catalog # PLB00

Sensitivity: 10 pg/mL
Range: 19.5-1250 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate.


Sample(s) Tested: porcine lamina propria lymphocyte cell culture supernate.


Sample(s) Tested: porcine serum, porcine BALF.


Sample(s) Tested: porcine plasma.

Quantikine Rat IL-1β/IL-1F2 ELISA

Catalog # RLB00*

Sensitivity: 5 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: homogenized rat colon tissue.


Sample(s) Tested: rat serum, homogenized rat lung tissue.


Sample(s) Tested: rat serum, homogenized rat brain and spleen tissue.


Sample(s) Tested: homogenized rat brain tissue, rat plasma (EDTA).

IL-1ra/IL-1F3

Quantikine Human IL-1ra/IL-1F3 ELISA

Catalog # DRA00B*

Sensitivity: 18.3 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: sheep amniotic fluid.


Sample(s) Tested: human plasma.

Quantikine Mouse IL-1ra/IL-1F3 ELISA

Catalog # MRA00

Sensitivity: 13 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: homogenized mouse eye tissue, mouse plasma (heparin).


Sample(s) Tested: mouse BALF, mouse plasma.


Sample(s) Tested: mouse serum.


Sample(s) Tested: mouse mesenchymal stem cell and mouse plastic adherent marrow cell culture supernates.

IL-1 RII/IL-1 R2

Quantikine Human Soluble IL-1 RII ELISA

Catalog # DR1B00

Sensitivity: 10 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: L428 glandular bud epithelial cell, L1236 human Hodgkin's lymphoma cell, and KM-H2 human prostate cancer cell culture supernates, human plasma.


Sample(s) Tested: human umbilical vein endothelial cell culture supernate and cell lysate.


Sample(s) Tested: human serum.


Sample(s) Tested: human synovial fluid.
IL-2

QuantiKine Human IL-2 ELISA  
Catalog # D2050*

Sensitivity: 7 pg/mL  
Range: 3.1-2000 pg/mL  
Sample Volume: 100 μL  
Validated Samples Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human serum.


Sample(s) Tested: human T cell culture supernate.


Sample(s) Tested: human plasma (heparin).

QuantiGlo Chemiluminescent Human IL-2 ELISA  
Catalog # Q2000B

Sensitivity: 0.25 pg/mL  
Range: 1.7-1250 pg/mL  
Sample Volume: 100 μL  
Validated Samples Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human serum.

Quantikine Mouse IL-2 ELISA  
Catalog # M2000*

Sensitivity: 3 pg/mL  
Range: 15.6-1000 pg/mL  
Sample Volume: 50 μL  
Validated Samples Type(s): cell culture supernate, serum.


Sample(s) Tested: homogenized human nasal polyp tissue.

Il-2 Rec

QuantiKine Human Soluble IL-2 Rα ELISA  
Catalog # DR2A00*

Sensitivity: 10 pg/mL  
Range: 78.1-5000 pg/mL  
Sample Volume: 50 μL  
Validated Samples Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: mouse serum.

Quantikine Rat IL-2 ELISA  
Catalog # R2000*

Sensitivity: 15 pg/mL  
Range: 31.2-2000 pg/mL  
Sample Volume: 50 μL  
Validated Samples Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: rat T cell culture supernate.

Quantikine Human IL-3 ELISA  
Catalog # D3000

Sensitivity: 7.4 pg/mL  
Range: 31.2-2000 pg/mL  
Sample Volume: 200 μL  
Validated Samples Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human serum.

IL-3

QuantiKine Human IL-3 ELISA  
Catalog # D3000

Sensitivity: 7.4 pg/mL  
Range: 31.2-2000 pg/mL  
Sample Volume: 200 μL  
Validated Samples Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: mouse serum.
IL-3 continued


**Sample(s) Tested:** human mesenchymal stromal cell culture supernate.


**Sample(s) Tested:** human plasma.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** human urine, human plasma.

**Quantikine Mouse IL-3 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>M3000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>2.5 pg/mL</td>
</tr>
<tr>
<td>Range</td>
<td>7.8-500 pg/mL</td>
</tr>
<tr>
<td>Sample Volume</td>
<td>50 μL</td>
</tr>
</tbody>
</table>

**Validated Sample Type(s):** cell culture supernate, serum.


**Sample(s) Tested:** mouse CD4+ T cell culture supernate.


**Sample(s) Tested:** mouse lymph node cell culture supernate.


**Sample(s) Tested:** mouse serum.

IL-4

**Quantikine Human IL-4 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>D4050*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>10 pg/mL</td>
</tr>
<tr>
<td>Range</td>
<td>3.1-2000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume</td>
<td>50 μL</td>
</tr>
</tbody>
</table>

**Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum.


**Sample(s) Tested:** human T cell culture supernate.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** human T cell culture supernate.


**Sample(s) Tested:** human BALF..


**Sample(s) Tested:** baboon plasma (EDTA).

**QuantiGlo Chemiluminescent Human IL-4 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Q4000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>1 pg/mL</td>
</tr>
<tr>
<td>Range</td>
<td>1.6-5000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume</td>
<td>150 μL</td>
</tr>
</tbody>
</table>

**Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum.


**Sample(s) Tested:** human lymphocyte cell culture supernate.

**Quantikine Mouse IL-4 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>M4000B*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>2 pg/mL</td>
</tr>
<tr>
<td>Range</td>
<td>7.8-500 pg/mL</td>
</tr>
<tr>
<td>Sample Volume</td>
<td>50 μL</td>
</tr>
</tbody>
</table>

**Validated Sample Type(s):** cell culture supernate, serum.


**Sample(s) Tested:** mouse BALF.


**Sample(s) Tested:** mouse serum.


**Sample(s) Tested:** mouse BALF.
IL-6

Quantikine Canine IL-6 ELISA

Catalog # CA6000
Sensitivity: 11.8 pg/mL
Range: 31.3-2000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: canine peripheral blood dendritic cell culture supernate.

Quantikine Human IL-6 ELISA

Catalog # D6050*
Sensitivity: 0.7 pg/mL
Range: 3.13-300 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: homogenized human colon tissue.


Sample(s) Tested: rabbit serum.


Sample(s) Tested: human serum, human bone marrow, human neuroblastoma cell culture supernate.


Sample(s) Tested: human BALF, human plasma.

Quantikine HS Human IL-6 ELISA

Catalog # HS600B*
Sensitivity: 0.11 pg/mL
Range: 0.156-10 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): plasma (citrate, EDTA), serum, urine.


Sample(s) Tested: human plasma.


Sample(s) Tested: human plasma.


Sample(s) Tested: human monocyte cell culture supernate.


Sample(s) Tested: human plasma.

---

IL-5

Quantikine Human IL-5 ELISA

Catalog # D5000B*
Sensitivity: 1.08 pg/mL
Range: 3.9-250 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), urine.

Quantikine Mouse IL-5 ELISA

Catalog # M5000*
Sensitivity: 7 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, serum (EDTA, heparin).

---

IL-6

Quantikine Canine IL-6 ELISA

Catalog # CA6000
Sensitivity: 11.8 pg/mL
Range: 31.3-2000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: canine peripheral blood dendritic cell culture supernate.

Quantikine Human IL-6 ELISA

Catalog # D6050*
Sensitivity: 0.7 pg/mL
Range: 3.13-300 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: homogenized human colon tissue.


Sample(s) Tested: rabbit serum.


Sample(s) Tested: human serum, human bone marrow, human neuroblastoma cell culture supernate.


Sample(s) Tested: human BALF, human plasma.

Quantikine HS Human IL-6 ELISA

Catalog # HS600B*
Sensitivity: 0.11 pg/mL
Range: 0.156-10 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): plasma (citrate, EDTA), serum, urine.


Sample(s) Tested: human plasma.


Sample(s) Tested: human plasma.


Sample(s) Tested: human monocyte cell culture supernate.


Sample(s) Tested: human plasma.
IL-6 continued

Sample(s) Tested: human BALF and bronchial wash.

Quantikine Chemiluminescent Human IL-6 ELISA Catalog # Q6000B*
Sensitivity: 0.35 pg/mL
Range: 0.48-1,500 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.
Sample(s) Tested: human plasma.
Sample(s) Tested: human plasma.
Sample(s) Tested: human plasma.
Sample(s) Tested: human serum, human synovial fluid.

Quantikine Mouse IL-6 ELISA Catalog # M6000B*
Sensitivity: 1.8 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.
Sample(s) Tested: MC38 mouse colon cancer cell culture supernate and cell lysate, mouse serum.
Sample(s) Tested: homogenized mouse kidney tissue.
Sample(s) Tested: mouse plasma (EDTA).
Sample(s) Tested: homogenized mouse lung and liver tissue.
Yang, S.I. et al. (2009) Inhibition of the chemokine (C-C motif) ligand 2/chemokine (C-C motif) receptor 2 pathway attenuates hyperglycaemia and inflammation in a mouse model of hepatic steatosis and lipatrophy. Diabetesologia 52:972.
Sample(s) Tested: mouse plasma.

Quantikine Porcine IL-6 ELISA Catalog # P6000
Sensitivity: 10 pg/mL
Range: 39.1-2500 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.
Sample(s) Tested: porcine plasma from LPS-stimulated whole blood.
Sample(s) Tested: porcine plasma.
Sample(s) Tested: porcine serum, porcine BALF.
Sample(s) Tested: porcine plasma (EDTA).
Sample(s) Tested: porcine serum.

Quantikine Rat IL-6 ELISA Catalog # R6000B*
Sensitivity: 36 pg/mL
Range: 62.5-4000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.
Sample(s) Tested: homogenized rat colon tissue.
Sample(s) Tested: rat astrocyte cell culture supernate.
Sample(s) Tested: rat plasma (EDTA), homogenized rat brain tissue.
Sample(s) Tested: rat serum, homogenized rat liver tissue.
Sample(s) Tested: rat BALF.
### IL-6 R

**Quantikine Human Soluble IL-6 R ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>DR600*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity:</td>
<td>15.1 pg/mL</td>
</tr>
<tr>
<td>Range:</td>
<td>31.2-2000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>100 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine,</td>
</tr>
</tbody>
</table>


Sample(s) Tested: human serum, human bone marrow, human neuroblast cell culture supernate.


Sample(s) Tested: human plasma.


Sample(s) Tested: human plasma (citrate).

Nishimoto, N. et al. (2008) Mechanisms and pathologic significances in increase in serum interleukin-6 (IL-6) and soluble IL-6 receptor after administration of an anti-IL-6 receptor antibody, tocilizumab, in patients with rheumatoid arthritis and Castleman disease. Blood 112:3959.

Sample(s) Tested: human serum.


Sample(s) Tested: human serum.

### IL-7

**Quantikine HS Human IL-7 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>HS750</th>
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</thead>
<tbody>
<tr>
<td>Sensitivity:</td>
<td>0.1 pg/mL</td>
</tr>
<tr>
<td>Range:</td>
<td>0.156-10 pg/mL (cell culture supernate), 0.25-16 pg/mL (serum/plasma)</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>200 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernate, plasma (citrate, EDTA), serum</td>
</tr>
</tbody>
</table>


Sample(s) Tested: human plasma.


Sample(s) Tested: human plasma.


Sample(s) Tested: human serum.


Sample(s) Tested: human synovial fluid.

Colucci, S. et al. (2007) Lymphocytes and synovial fluid fibroblasts support osteoclastogenesis through RANKL, TNF-α, and IL-7 in an in vitro model derived from human psoriatic arthritis. J. Pathol. 212:47.

Sample(s) Tested: human serum, human synovial fluid.

**Quantikine Mouse IL-7 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>M7000</th>
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<tbody>
<tr>
<td>Sensitivity:</td>
<td>8.3 pg/mL</td>
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<tr>
<td>Range:</td>
<td>31.2-2000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>50 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernate, plasma (EDTA), serum</td>
</tr>
</tbody>
</table>


Sample(s) Tested: mouse osteoblast cell culture supernate.

### IL-10

**Quantikine Canine IL-10 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>CA1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity:</td>
<td>3.8 pg/mL</td>
</tr>
<tr>
<td>Range:</td>
<td>15.6-1000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>50 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernate, plasma (EDTA, heparin), serum</td>
</tr>
</tbody>
</table>


Sample(s) Tested: canine serum.

**Quantikine Human IL-10 ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>D1000B*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity:</td>
<td>3.9 pg/mL</td>
</tr>
<tr>
<td>Range:</td>
<td>7.8-500 pg/mL</td>
</tr>
<tr>
<td>Sample Volume:</td>
<td>200 μL</td>
</tr>
<tr>
<td>Validated Sample Type(s):</td>
<td>cell culture supernate, plasma (citrate, EDTA, heparin)</td>
</tr>
</tbody>
</table>


Sample(s) Tested: human peripheral blood mononuclear cell, human mesenchymal stem cell, and human corneal epithelial cell culture supernates.


Sample(s) Tested: human whole blood, peripheral blood mononuclear cell and monocyte cell culture supernates.


Sample(s) Tested: homogenized human nasal polyp tissue.


Sample(s) Tested: human serum.


Sample(s) Tested: human sputum.
IL-10 continued

**Quantikine HS Human IL-10 ELISA**

**Catalog # HS1008**

**Sensitivity:** 0.5 pg/mL
**Range:** 0.78-50 pg/mL
**Sample Volume:** 200 μL
**Validated Sample Type(s):** plasma (citrate, EDTA), serum.


**Sample(s) Tested:** human gingival crevicular fluid.

**Quantikine HS Human IL-10 ELISA**

**Catalog # HS1008**

**Sensitivity:** 4 pg/mL
**Range:** 1-1000 pg/mL
**Sample Volume:** 50 μL
**Validated Sample Type(s):** cell culture supernate, plasma (EDTA), serum.


**Sample(s) Tested:** porcine peripheral blood mononuclear cell culture supernate.

**Quantikine Porcine IL-10 ELISA**

**Catalog # P1000**

**Sensitivity:** 3.5 pg/mL
**Range:** 3.2-2000 pg/mL
**Sample Volume:** 100 μL
**Validated Sample Type(s):** cell culture supernate, plasma (EDTA), serum.


**Sample(s) Tested:** porcine peripheral blood mononuclear cell culture supernate.

**Quantikine Rat IL-10 ELISA**

**Catalog # R1000**

**Sensitivity:** 10 pg/mL
**Range:** 31.2-2000 pg/mL
**Sample Volume:** 50 μL
**Validated Sample Type(s):** cell culture supernate, plasma (EDTA), serum.


**Sample(s) Tested:** rat peritoneal macrophage cell culture supernate.

**Quantikine Mouse IL-10 ELISA**

**Catalog # M1000**

**Sensitivity:** 4 pg/mL
**Range:** 15.6-1000 pg/mL
**Sample Volume:** 50 μL
**Validated Sample Type(s):** cell culture supernate, serum.


**Sample(s) Tested:** mouse plasma, homogenized mouse liver tissue.

**Sample(s) Tested:** mouse monocyte/T cell co-culture supernate.


**Sample(s) Tested:** mouse serum.


**Sample(s) Tested:** mouse splenocyte cell culture supernate, mouse plasma, homogenized mouse liver and lung tissue.

**Sample(s) Tested:** mouse BALF.
IL-11

Quantikine Human IL-11 ELISA  Catalog # D1100
Sensitivity: 8 pg/mL
Range: 15.6-1000 pg/mL (cell culture supernate), 31.2-2000 pg/mL (serum/plasma)
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: HEp-2 human larynx squamous carcinoma cell culture supernate.

Sample(s) Tested: human mesenchymal stem cell culture supernate.

Sample(s) Tested: human plasma.

Sample(s) Tested: human nasal secretions.

IL-12

Quantikine Human IL-12 ELISA  Catalog # D1200*
Sensitivity: 5 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 200 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.


Sample(s) Tested: human serum, human CSF.

Sample(s) Tested: human dendritic cell culture supernate.

Sample(s) Tested: human dendritic cell and iNKT cell culture supernates.

Sample(s) Tested: human serum.

Sample(s) Tested: human plasma (heparin).

Quantikine HS Human IL-12 ELISA  Catalog # HS120*
Sensitivity: 0.5 pg/mL
Range: 0.625-40 pg/mL (cell culture supernate), 0.781-50 pg/mL (serum, plasma)
Sample Volume: 200 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sample(s) Tested: homogenized human melanoma tissue, human fine needle aspirate of melanoma tissue.

Sample(s) Tested: human dendritic cell culture supernate.

Sample(s) Tested: human plasma.

Sample(s) Tested: human monocyte and CD4+ T cell culture supernates.

Sample(s) Tested: human plasma (heparin).

Quantikine Mouse IL-12 p70 ELISA  Catalog # M1270*
Sensitivity: 2.5 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sample(s) Tested: mouse serum.

Sample(s) Tested: mouse serum.

Sample(s) Tested: mouse monocyte/T cell co-culture supernate.

Sample(s) Tested: mouse BALF, mouse mixed lymphocyte reaction cell culture supernate.

Sample(s) Tested: mouse BALF, mouse plasma (EDTA).
IL-12/IL-23 p40

Quantikine Human IL-12/IL-23 p40 ELISA

Catalog # DP400*

Sensitivity: 15 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.
Sample(s) Tested: human dendritic cell culture supernate.
Sample(s) Tested: human serum.

Sample(s) Tested:

Sample(s) Tested: human dendritic cell and iNKT cell culture supernates.
Sample(s) Tested: human serum.
Sample(s) Tested: human serum.

Quantikine Mouse IL-12/IL-23 p40 (Allele-specific) ELISA

Catalog # M1240*

Sensitivity: 4 pg/mL
Range: 11.7-750 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, serum.

Sample(s) Tested: mouse serum.
Sample(s) Tested: mouse serum.
Sample(s) Tested: mouse BALF, mouse BAL-derived macroage cell culture supernate.
Sample(s) Tested: mouse serum.
Sample(s) Tested: mouse serum.

Quantikine Mouse IL-12/IL-23 p40 (Non-Allele-specific) ELISA

Catalog # MP400*

Sensitivity: 2.7 pg/mL
Range: 11.7-750 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sample(s) Tested: mouse BALF, mouse T cell and peritoneal macrophage cell culture supernates.

Sample(s) Tested: mouse macrophage cell culture supernate.

Sample(s) Tested: mouse BALF, mouse mixed lymphocyte reaction cell culture supernate.
Sample(s) Tested: mouse BALF.

Sample(s) Tested: mouse serum.

Quantikine Porcine IL-12/IL-23 p40 ELISA

Catalog # P1240

Sensitivity: 18.2 pg/mL
Range: 46.9-3000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sample(s) Tested: porcine lamina propria lymphocytes cell culture supernate.

Sample(s) Tested: human whole blood/porcine aortic endothelial cell co-culture supernate.

IL-13

Quantikine Human IL-13 ELISA

Catalog # D1300*

Sensitivity: 32 pg/mL
Range: 62.5-4000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Sample(s) Tested: human T cell culture supernate.

Sample(s) Tested: human Hodgkin's lymphoma cell culture supernate.


IL-16

Quantikine Human IL-16 ELISA

Sensitivity: 13.4 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Tsai, I.S. et al. (2005) Interleukin-12 and interleukin-16 in periodontal disease. Cytokine 31:34.

Sample(s) Tested: human serum, human pleural effusion.


Sample(s) Tested: human serum, human pleural effusion.


Sample(s) Tested: human plasma, human peritoneal fluid, human pleural effusion.


Sample(s) Tested: human serum.


Sample(s) Tested: human plasma (EDTA and heparin).

Sample(s) Tested: homogenized mouse heart tissue, mouse splenocyte cell culture supernate.

**IL-19**

Quantikine Human IL-19 ELISA

Catalog # D1900

Sensitivity: 12.2 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum, and urine.


Sample(s) Tested: human monocyte-derived dendritic cell culture supernate.

**IL-20**

Quantikine Human IL-20 ELISA

Catalog # DL200

Sensitivity: 16.6 pg/mL
Range: 62.5-4000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

**IL-22**

Quantikine Human IL-22 ELISA

Catalog # D2200

Sensitivity: 5.8 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.


Sample(s) Tested: human T cell culture supernate.


Sample(s) Tested: human anaplastic large-cell lymphoma cell culture supernate.


Sample(s) Tested: human BALT, human T cell culture supernate.


Sample(s) Tested: human serum.


Sample(s) Tested: human activated T cell culture supernate.

**Quantikine Mouse/Rat IL-23 ELISA**

Catalog # D2300B

Sensitivity: 16.3 pg/mL
Range: 39-2500 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human plasma.


Sample(s) Tested: human serum, human peripheral blood mononuclear cell culture supernate.

**Quantikine Mouse IL-23 ELISA**

Catalog # M2300

Sensitivity: 4.17 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.


Sample(s) Tested: mouse splenocyte cell culture supernate.
ELISA REFERENCE GUIDE

IL-27 p28
Quantikine Mouse IL-27 p28 ELISA
Catalog # M2728
Sensitivity: 4.7 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
Sample(s) Tested: mouse serum.
Sample(s) Tested: mouse T cell culture supernate.
Sample(s) Tested: mouse astrocyte cell culture supernate.
Sample(s) Tested: mouse astrocyte and splenocyte cell culture supernates.
Sample(s) Tested: mouse serum, mouse bone marrow-derived dendritic cell culture supernate.

IL-33
Quantikine Mouse IL-33 ELISA
Catalog # M3300
Sensitivity: 14.3 pg/mL
Range: 31.3-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
Sample(s) Tested: mouse spleenocyte cell culture supernate.

JNK
Cell-Based ELISA Human/Mouse/Rat Phospho-JNK (T183/Y185)
Catalog # KCB1205
Sample Volume: 100 μL
Validated Sample Type(s): whole cells.

Kallikrein 3/PSA
Quantikine Human Kallikrein 3/PSA ELISA
Catalog # DKK300
Sensitivity: 0.069 ng/mL
Range: 0.94-60 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
Sample(s) Tested: LNCaP, 22Rv1, and LAPC4 human prostate cancer cell culture supernates.

KGF/FGF-7
Quantikine Human KGF/FGF-7 ELISA
Catalog # DKG00
Sensitivity: 15 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.
Sample(s) Tested: human serum.
Sample(s) Tested: human BALF, normal human lung fibroblast cell culture supernate.
Sample(s) Tested: human foreskin and dermal fibroblast cell culture supernates.

Leptin/OB
Quantikine Human Leptin ELISA
Catalog # DLP00*
Sensitivity: 7.8 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.
Sample(s) Tested: human serum.

* Multipacks available
For research use only. Not for use in diagnostic procedures unless otherwise indicated.

**Sample(s) Tested:** human plasma.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** human plasma.

#### Leptin

**Quantikine Mouse Leptin ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>MOB000*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensitivity:</strong></td>
<td>22 pg/mL</td>
</tr>
<tr>
<td><strong>Range:</strong></td>
<td>62.5-4000 pg/mL</td>
</tr>
<tr>
<td><strong>Sample Volume:</strong></td>
<td>50 μL</td>
</tr>
</tbody>
</table>

**Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.

**Sample(s) Tested:** mouse plasma.


**Sample(s) Tested:** rat plasma, rat CSF.


**Sample(s) Tested:** mouse plasma.


**Sample(s) Tested:** homogenized mouse adipose tissue.


**Sample(s) Tested:** 3T3-L1 mouse embryonic fibroblast cell culture supernate.

#### LIF

**Quantikine Human LIF ELISA**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>DLF00</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensitivity:</strong></td>
<td>8 pg/mL</td>
</tr>
<tr>
<td><strong>Range:</strong></td>
<td>31.2-2000 pg/mL</td>
</tr>
<tr>
<td><strong>Sample Volume:</strong></td>
<td>200 μL</td>
</tr>
</tbody>
</table>

**Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.


**Sample(s) Tested:** human plasma.


**Sample(s) Tested:** human endometrial epithelial cell culture supernate.


**Sample(s) Tested:** human monocyte cell culture supernate.


**Sample(s) Tested:** human pancreatic carcinoma cell culture supernate.


**Sample(s) Tested:** human astrocyte cell culture supernate.
**LIF continued**

**Quantikine Mouse LIF ELISA**  
Catalog # MLF00

Sensitivity: 3.13 pg/mL  
Range: 21.9-1400 pg/mL  
Sample Volume: 50 μL

Sample(s) Tested: RAW264.7 mouse macrophage cell culture supernate.


Sample(s) Tested: mouse serum.

**Quantikine Human LIGHT/TNFSF14 ELISA**  
Catalog # DLIT00

Sensitivity: 16.5 pg/mL  
Range: 31.2-2000 pg/mL  
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.


Sample(s) Tested: human umbilical vein endothelial cell culture supernate.


Sample(s) Tested: human serum.


Sample(s) Tested: human melanocyte cell culture supernate.


Sample(s) Tested: human platelet cell culture supernate, plasma (ACD).


Sample(s) Tested: human serum.

**Lipocalin-2/NGAL**

**Quantikine Human Lipocalin-2/NGAL ELISA**  
Catalog # DLCN20

Sensitivity: 0.04 ng/mL  
Range: 0.156-10 ng/mL  
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (heparin), saliva, serum, urine.


Sample(s) Tested: human urine.

**Quantikine Mouse Lipocalin-2/NGAL ELISA**  
Catalog # MLCN20

Sensitivity: 8.8 pg/mL  
Range: 78.1-5000 pg/mL  
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum, urine.

**LOX-1/SR-E1**

**Quantikine Mouse LOX-1/SR-E1 ELISA**  
Catalog # MLX10

Sensitivity: 5.21 pg/mL  
Range: 39.1-2500 pg/mL  
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: mouse plasma (citrate).

**MBL**

**Quantikine Human MBL ELISA**  
Catalog # DMBL00

Sensitivity: 0.029 ng/mL  
Range: 0.156-10 ng/mL  
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
M-CSF

**Quantikine Human M-CSF ELISA**

Catalog # DMCO0*

<table>
<thead>
<tr>
<th>Sensitivity: 9 pg/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 31.2-2000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume: 100 μL</td>
</tr>
</tbody>
</table>

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human skin single-cell suspension cell culture supernate.


Sample(s) Tested: human monocyte cell culture supernate.


Sample(s) Tested: homogenized mouse cervix tissue.


Sample(s) Tested: mouse intervertebral disc explant cell culture supernate.


Sample(s) Tested: mouse lymph node cell culture supernate.


Sample(s) Tested: mouse serum.


Sample(s) Tested: homogenized mouse bone, brain, lung, kidney and uterus tissue.

**Quantikine Mouse M-CSF ELISA**

Catalog # MMC00*

<table>
<thead>
<tr>
<th>Sensitivity: 5 pg/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 31.2-2000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume: 50 μL</td>
</tr>
</tbody>
</table>

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: homogenized mouse cervix tissue.

Validated Sample Type(s): mouse cervical tissue.


Sample(s) Tested: mouse cervical tissue.


Sample(s) Tested: mouse serum.


Sample(s) Tested: homogenized mouse bone, brain, lung, kidney and uterus tissue.

**MEK**

**Cell-Based ELISA Human/Mouse**

**Phospho-MEK1 (S218/S222)/MEK2 (S222/S226)**

Catalog # KCB2506*

<table>
<thead>
<tr>
<th>Sensitivity: 0.015 ng/mL</th>
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</thead>
<tbody>
<tr>
<td>Range: 0.39-25 ng/mL</td>
</tr>
<tr>
<td>Sample Volume: 150 μL</td>
</tr>
</tbody>
</table>

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.


Sample(s) Tested: human fibroblast-like synoviocyte cell culture supernate.


Sample(s) Tested: LX2 human hepatic stellate cell culture supernate.


Sample(s) Tested: PC3, LNCaP, and PrEC human prostate cancer cell culture supernates.

**Quantikine Human Pro-MMP-1 ELISA**

Catalog # DMP100*

<table>
<thead>
<tr>
<th>Sensitivity: 0.095 ng/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 0.156-10 ng/mL</td>
</tr>
<tr>
<td>Sample Volume: 100 μL</td>
</tr>
</tbody>
</table>

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.


Sample(s) Tested: human ovarian/hepatic ascities, ovarian cystic fluid, pleural effusion, OVCAR-4 human ovarian cancer cell culture supernate.

**Fluorokine E Human Active MMP-1 ELISA**

Catalog # F1M00*

<table>
<thead>
<tr>
<th>Sensitivity: 0.015 ng/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 0.39-25 ng/mL</td>
</tr>
<tr>
<td>Sample Volume: 150 μL</td>
</tr>
</tbody>
</table>

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.


Sample(s) Tested: human fibroblast-like synoviocyte cell culture supernate.


Sample(s) Tested: LX2 human hepatic stellate cell culture supernate.


Sample(s) Tested: PC3, LNCaP, and PrEC human prostate cancer cell culture supernates.

**β_2-Microglobulin/β_2M**

**Quantikine IVD Human β_2-Microglobulin ELISA**

Catalog # DBM200*

<table>
<thead>
<tr>
<th>Sensitivity: 0.2 μg/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 0.4-12 μg/mL</td>
</tr>
<tr>
<td>Sample Volume: 20 μL</td>
</tr>
</tbody>
</table>

Validated Sample Type(s): serum, urine.


Sample(s) Tested: human serum.


Sample(s) Tested: C4-284 human prostate cancer cell culture supernate.

**β_2-Microglobulin ELISA**

Catalog # E0M00*

<table>
<thead>
<tr>
<th>Sensitivity: 0.005 ng/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 0.005-25 ng/mL</td>
</tr>
<tr>
<td>Sample Volume: 100 μL</td>
</tr>
</tbody>
</table>

Validated Sample Type(s): whole cells.


Sample(s) Tested: human serum.


Sample(s) Tested: C4-284 human prostate cancer cell culture supernate.
**MMP-1 continued**


*Sample(s) Tested:* human osteoarthritic cartilage explant cell culture supernate.


*Sample(s) Tested:* human serum and plasma.


*Sample(s) Tested:* U937 human leukemic monocyte lymphoma cell culture supernate.


*Sample(s) Tested:* MCF-7 human breast cancer cell culture supernate.

---

**MMP-2**

**Quantikine Human MMP-2 ELISA**

Catalog # DMP2F0*

Sensitivity: 0.289 ng/mL
Range: 0.78-50 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.


*Sample(s) Tested:* human fibroblast-like synoviocyte cell culture supernate.

---

**MMP-3**

**Quantikine Human Total MMP-3 ELISA**

Catalog # DMP300*

Sensitivity: 0.045 ng/mL
Range: 0.156-10 ng/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.


*Sample(s) Tested:* human serum.


*Sample(s) Tested:* human fibroblast-like synoviocyte cell culture supernate.


*Sample(s) Tested:* human serum.


*Sample(s) Tested:* human ovarian/hepatic ascities, ovarian cystic fluid, pleural effusion, OVCAR-4 human ovarian cancer cell culture supernate.


*Sample(s) Tested:* human serum.

---

**Quantikine Mouse Total MMP-3 ELISA**

Catalog # MMP300

Sensitivity: 0.053 ng/mL
Range: 0.312-10 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, serum.


*Sample(s) Tested:* mouse stromal cell culture supernate.


*Sample(s) Tested:* homogenized mouse heart tissue.

---

**MMP-7**

**Quantikine Human Total MMP-7 ELISA**

Catalog # DMP700*

Sensitivity: 0.094 ng/mL
Range: 0.156-10 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (heparin), saliva, serum, urine.


*Sample(s) Tested:* SW620 human colon cancer cell culture supernate.


*Sample(s) Tested:* human plasma.


*Sample(s) Tested:* human serum and plasma.


*Sample(s) Tested:* human BALF.


*Sample(s) Tested:* homogenized human gastric mucosa tissue.

---

**MMP-8**

**Quantikine Human Total MMP-8 ELISA**

Catalog # DMP800*

Sensitivity: 0.06 ng/mL
Range: 0.156-10 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, platelet-poor plasma (heparin), saliva, serum.


*Sample(s) Tested:* U937 human leukemic monocyte lymphoma cell culture supernate.

Sample(s) Tested: human ovarian/hepatic ascities, ovarian cystic fluid, pleural effusion, OVCAR-4 human ovarian cancer cell culture supernate.


Sample(s) Tested: human neutrophil cell culture supernate.


Sample(s) Tested: human sputum.


Sample(s) Tested: human gingival crevicular fluid.

**MMP-9**

**Fluorokine E Human Active MMP-9 ELISA**  
Catalog # F9M00  
Sensitivity: 0.01 ng/mL  
Range: 0.25–16 ng/mL  
Sample Volume: 200 μL  
Validated Sample Type(s): cell culture supernate, plasma (heparin), serum, urine.


Sample(s) Tested: human BALF.


Sample(s) Tested: GS human pancreatic cancer cell lysate.


Sample(s) Tested: Colo-357 human pancreatic cancer cell culture supernate.


Sample(s) Tested: human endothelial cell culture supernate.


Sample(s) Tested: BxPC-3 human pancreatic cancer cell lysate.

**Quantikine Human MMP-9 ELISA**  
Catalog # DMP900  
Sensitivity: 0.156 ng/mL  
Range: 0.25–16 ng/mL  
Sample Volume: 100 μL  
Validated Sample Type(s): cell culture supernate, platelet-poor plasma (heparin), saliva, serum, urine.


Sample(s) Tested: human serum.


Sample(s) Tested: human plasma.


Sample(s) Tested: human peripheral blood mononuclear cell culture supernate.


Sample(s) Tested: mouse bone marrow aspirate cell lysate.


Sample(s) Tested: human vitreous humor.

**Quantikine Mouse Total MMP-9 ELISA**  
Catalog # MMPT90  
Sensitivity: 0.014 ng/mL  
Range: 0.078–5 ng/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.


Sample(s) Tested: mouse serum.

**Quantikine Mouse Pro-MMP-9 ELISA**  
Catalog # MMP900B  
Sensitivity: 14 pg/mL  
Range: 31.3–2000 pg/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum.

**MMP-9/NGAL Complex**

**Quantikine Human MMP9/NGAL Complex ELISA**  
Catalog # DM9L20  
Sensitivity: 0.058 ng/mL  
Range: 0.312–20 ng/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, plasma (heparin), saliva, serum, urine.


Sample(s) Tested: human serum.


Sample(s) Tested: human urine, human CSF.


Sample(s) Tested: homogenized human abdominal aortic aneurysm tissue.
**MMP9/NGAL Complex continued**

Martín-Ventura, J.L. et al. (2006) Low plasma levels of HSP70 in patients with carotid atherosclerosis are associated with increased levels of proteolytic markers of neutrophil activation. Atherosclerosis 194:334.

*Sample(s) Tested:* human plasma, human carotid endartery explant cell culture supernate.

---

**MMP-10**

**Quantikine Human Pro-MMP-10 ELISA**

*Catalog # DM1000*

<table>
<thead>
<tr>
<th>Sensitivity: 15.1 pg/mL</th>
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</thead>
<tbody>
<tr>
<td>Range: 78.1-5000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume: 50 μL</td>
</tr>
</tbody>
</table>

*Validated Sample Type(s):* cell culture supernate, plasma (heparin), serum.


*Sample(s) Tested:* human mesangial cell culture supernate.


*Sample(s) Tested:* human synovial fluid.


*Sample(s) Tested:* human endothelial cell culture supernate.


*Sample(s) Tested:* human synovial fluid, human chondrocyte cell culture supernate.


*Sample(s) Tested:* PC3, LNCaP, and PrEC human prostate cancer cell culture supernates.

---

**MMP-13**

**Fluorokine E Human Active MMP-13 ELISA**

*Catalog # F13M00*

<table>
<thead>
<tr>
<th>Sensitivity: 0.015 ng/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 0.25-16 ng/mL</td>
</tr>
<tr>
<td>Sample Volume: 200 μL</td>
</tr>
</tbody>
</table>

*Validated Sample Type(s):* cell culture supernate.


*Sample(s) Tested:* human chondrocyte cell culture supernate.


*Sample(s) Tested:* PC3, LNCaP, and PrEC human prostate cancer cell culture supernates.

---

**Quantikine Human Pro-MMP-13 ELISA**

*Catalog # DM1300*

<table>
<thead>
<tr>
<th>Sensitivity: 21.3 pg/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 78-5000 pg/mL</td>
</tr>
<tr>
<td>Sample Volume: 50 μL</td>
</tr>
</tbody>
</table>

*Validated Sample Type(s):* cell culture supernate.


*Sample(s) Tested:* human chondrocyte cell culture supernate.


*Sample(s) Tested:* human ovarian/hepatic ascities, ovarian cystic fluid, pleural effusion, OVCAR-4 human ovarian cancer cell culture supernate.


*Sample(s) Tested:* human chondrocyte cell culture supernate.


*Sample(s) Tested:* human osteoarthritic cartilage explant cell culture supernate.


*Sample(s) Tested:* human synovial fluid.

---

**Myeloperoxidase/MPO**

**Quantikine Human MPO ELISA**

*Catalog # DMYE00*

<table>
<thead>
<tr>
<th>Sensitivity: 0.618 ng/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range: 5.6-100 ng/mL</td>
</tr>
<tr>
<td>Sample Volume: 50 μL</td>
</tr>
</tbody>
</table>

*Validated Sample Type(s):* breast milk, cell culture supernate, cell lysate, plasma (EDTA, heparin), saliva, serum, urine.


*Sample(s) Tested:* human sputum.


*Sample(s) Tested:* human plasma.


*Sample(s) Tested:* human BALF.
Nitric Oxide

Parameter Multi-species Nitrite/Nitrate & Total NO ELISA

Sensitivity: 0.78 μmol/L
Range: 3.12-200 μmol/L
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.


Sample(s) Tested: human urines.


Sample(s) Tested: human umbilical vein endothelial cell culture supernate.


Sample(s) Tested: human plasma (heparin).


Sample(s) Tested: homogenized rat kidney tissue.


Sample(s) Tested: human serum.

endothelial Nitric Oxide Synthase/eNOS

Quantikine Human eNOS ELISA

Catalog # DEN00

Sensitivity: 25 pg/mL
Range: 62.5-4000 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell lysate.


Sample(s) Tested: human fetal embryonic cord cell lysate.


Sample(s) Tested: homogenized human muscle tissue, human umbilical vein endothelial cell lysate.


Sample(s) Tested: human erythroid cell lysate.


Sample(s) Tested: human umbilical vein endothelial cell lysate.

inducible Nitric Oxide Synthase/iNOS

Quantikine Human iNOS ELISA

Catalog # DNS00

Sensitivity: 0.46 U/mL
Range: 1.25-80 U/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell lysate.


Sample(s) Tested: human umbilical vein endothelial cell lysate.


Sample(s) Tested: homogenized rat kidney tissue, rat plasma.


Sample(s) Tested: homogenized mouse diaphragm tissue.


Sample(s) Tested: DLD-1 human colon cancer cell lysate.


Sample(s) Tested: THP-1 human acute monocytic leukemia cell culture supernate.

Osteopontin/OPN

Quantikine Human OPN ELISA

Catalog # DOST00

Sensitivity: 0.024 ng/mL
Range: 0.312-20 ng/mL
Sample Volume: 100 μL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), urine.


Sample(s) Tested: human serum.


Sample(s) Tested: human plasma (heparin).


Sample(s) Tested: human plasma.


Sample(s) Tested: human bone marrow.
Osteopontin/OPN continued


Sample(s) Tested: human monocyte cell culture supernate.

Quantikine Mouse OPN ELISA

Catalog # MOST00

Sensitivity: 8.5 pg/mL
Range: 39-2500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.


Sample(s) Tested: mouse serum.


Sample(s) Tested: RIE-iHa-Ras rat intestinal epithelial cell culture supernate.


Sample(s) Tested: mouse plasma.

Osteoprotegerin/TNFRSF11B

Quantikine Mouse Osteoprotegerin/TNFRSF11B ELISA

Catalog # MOP00

Sensitivity: 4.5 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): whole cells.


Sample(s) Tested: mouse bone marrow osteoblast cell culture supernate.


Sample(s) Tested: mouse serum.


Sample(s) Tested: mouse serum.


Sample(s) Tested: C2C12 mouse myoblast cell culture supernate.


Sample(s) Tested: mouse plasma (EDTA).

p38

Cell-Based ELISA Human/Mouse Phospho-p38 MAP Kinase (T180/Y182)

Catalog # KCB869

Sample Volume: 100 μL
Validated Sample Type(s): whole cells.

p38α

Surveyor IC Human/Mouse/Rat Phospho-p38α (T180/Y182) ELISA

Catalog # SUV869

Range: 62.5-4000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell lysate.


Sample(s) Tested: homogenized rat spinal cord tissue.

p70 S6 Kinase

Cell-Based ELISA Human/Mouse Phospho-p70 S6 Kinase (T389)

Catalog # KCB8963

Sample Volume: 100 μL
Validated Sample Type(s): whole cells.

Pappalysin-1/PAPP-A

Quantikine Human Pappalysin-1/PAPP-A ELISA

Catalog # DPPA00

Sensitivity: 0.116 ng/mL
Range: 0.78-50 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human serum.

PDGF-AA

Quantikine Human/Mouse PDGF-AA ELISA

Catalog # DAA00B

Sensitivity: 6.29 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), saliva, serum.


Sample(s) Tested: mouse BALF.
Sample(s) Tested: human plasma.

Sample(s) Tested: mouse plasma.

Sample(s) Tested: rat serum.

Sample(s) Tested: mouse BALF.

Sample(s) Tested: mouse plasma.

Sample(s) Tested: mouse plasma.

Sample(s) Tested: rat serum.

Sample(s) Tested: mouse BALF.

Sample(s) Tested: mouse plasma.

PDGF-AB
Quantikine Human PDGF-AB ELISA
Catalog # DHD00B
Sensitivity: 5.9 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, serum, platelet-poor plasma (EDTA, heparin).
Sample(s) Tested: human plasma.

Sample(s) Tested: porcine plasma.

Sample(s) Tested: human plasma.

Sample(s) Tested: human plasma, platelet-poor plasma, and platelet concentrate.

Sample(s) Tested: human umbilical cord endothelial cell culture supernate.

Sample(s) Tested: NF-21 human gastric fibroblast cell and OCUM-2M human gastric cancer cell culture supernates.

Sample(s) Tested: human plasma (CPDA), human serum, human platelet cell culture supernate.

Quantikine Mouse/Rat PDGF-AB ELISA
Catalog # MHD00
Sensitivity: 3.8 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum.
Sample(s) Tested: homogenized mouse lung tissue.

PDGF-BB
Quantikine Human PDGF-BB ELISA
Catalog # DBB00
Sensitivity: 15 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum.
Sample(s) Tested: human plasma.

Sample(s) Tested: porcine plasma.

Sample(s) Tested: rat serum.

Sample(s) Tested: mouse BALF.

Sample(s) Tested: mouse plasma.

Sample(s) Tested: mouse plasma.

Quantikine Mouse/Rat PDGF-BB ELISA
Catalog # MBB00
Sensitivity: 19.3 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
Sample(s) Tested: homogenized mouse muscle tissue.

Quantikine Mouse/Rat PDGF-BB ELISA
Catalog # MBB00
Sensitivity: 19.3 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
Sample(s) Tested: homogenized mouse muscle tissue.

Quantikine Mouse/Rat PDGF-BB ELISA
Catalog # MBB00
Sensitivity: 19.3 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
Sample(s) Tested: homogenized mouse muscle tissue.

Quantikine Mouse/Rat PDGF-BB ELISA
Catalog # MBB00
Sensitivity: 19.3 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
Sample(s) Tested: homogenized mouse muscle tissue.

Quantikine Mouse/Rat PDGF-BB ELISA
Catalog # MBB00
Sensitivity: 19.3 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
Sample(s) Tested: homogenized mouse muscle tissue.
**PDGF-BB continued**


Sample(s) Tested: B16 mouse melanoma cell culture supernate.

Klopp, A.H. et al. (2007) Tumor irradiation increases the recruitment of circulating mesenchymal stem cells into the tumor microenvironment. Cancer Res. 67:11687.

Sample(s) Tested: 4T1 mouse mammary carcinoma cell culture supernate.


Sample(s) Tested: mouse BALF.


Sample(s) Tested: mouse plasma.

---

**PDGF Rβ**

**Cell-Based ELISA Human Phospho-PDGF Rβ (Y751)** Catalog # KCB1767

Sample Volume: 100 μL

Validated Sample Type(s): whole cells.

**Cell-Based ELISA Human Phospho-PDGF Rβ (Y1021)** Catalog # KCB2316

Sample Volume: 100 μL

Validated Sample Type(s): whole cells.

**Cell-Based ELISA Mouse Phospho-PDGF Rβ (Y1021)** Catalog # KCB1042

Sample Volume: 100 μL

Validated Sample Type(s): whole cells.

---

**Pentraxin 3/TSG-14**

**Quantikine Human Pentraxin 3/TSG-14 ELISA** Catalog # DPTX30

Sensitivity: 0.116 ng/mL

Range: 0.31-20 ng/mL

Sample Volume: 20 μL

Validated Sample Type(s): cell culture supernate (serum-free), plasma (EDTA), saliva.


Sample(s) Tested: LPS-stimulated whole blood.

**Quantikine Mouse Pentraxin 3/TSG-14 ELISA** Catalog # MPTX30

Sensitivity: 0.02 ng/mL

Range: 0.23-15 ng/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: mouse intestinal tissue, mouse serum.

---

**Periostin/OSF-2**

**Quantikine Mouse Periostin/OSF-2 ELISA** Catalog # MOSF20

Sensitivity: 0.065 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (heparin, EDTA), serum.

---

**PIGF**

**Quantikine Human PIGF ELISA** Catalog # DPG00

Sensitivity: 7 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.


Sample(s) Tested: human NK cell culture supernate.


Sample(s) Tested: human plasma (heparin).


Sample(s) Tested: human umbilical vein endothelial cell culture supernate.


Sample(s) Tested: human endometrial lymphocyte cell culture supernate.


Sample(s) Tested: human plasma.

---

**Quantikine Human VEGF/PIGF Heterodimer ELISA** Catalog # DVPH00

Sensitivity: 10.8 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: human plasma.
**PIGF-2**

**Quantikine Mouse PIGF-2 ELISA**

- **Catalog #**: MP200
- **Sensitivity**: 1.84 pg/mL
- **Range**: 23.4-1500 pg/mL
- **Sample Volume**: 50 μL
- **Validated Sample Type(s)**: cell culture supernate, plasma (EDTA), serum.


**Sample(s) Tested**: LLC mouse Lewis carcinoma cell and B16-F10 mouse melanoma cell culture supernates.


**Sample(s) Tested**: mouse plasma.


**Sample(s) Tested**: homogenized mouse wound tissue.


**Sample(s) Tested**: homogenized mouse adipose tissue.


**Sample(s) Tested**: homogenized mouse ear tissue.

---

**Pref-1/DLK-1/FA1**

**Quantikine Human Pref-1/DLK-1/FA1 ELISA**

- **Catalog #**: DPRF10
- **Sensitivity**: 0.034 ng/mL
- **Range**: 0.156-10 ng/mL
- **Sample Volume**: 50 μL
- **Validated Sample Type(s)**: cell culture supernate, plasma (EDTA, heparin), serum.

---

**Proprotein Convertase 9/PCSK9**

**Quantikine Human Proprotein Convertase 9/PCSK9 ELISA**

- **Catalog #**: DPC900
- **Sensitivity**: 0.219 ng/mL
- **Range**: 0.625-40 ng/mL
- **Sample Volume**: 50 μL
- **Validated Sample Type(s)**: cell culture supernate, cell lysates, plasma (EDTA, heparin), serum.

**Sample(s) Tested**: human plasma, serum.

---

**RAGE**

**Quantikine Human RAGE ELISA**

- **Catalog #**: DRG00*
- **Sensitivity**: 16.14 pg/mL
- **Range**: 78-5000 pg/mL
- **Sample Volume**: 50 μL
- **Validated Sample Type(s)**: cell culture supernate, plasma (EDTA, heparin), serum.


**Sample(s) Tested**: human plasma, serum.


**Sample(s) Tested**: human plasma.


**Sample(s) Tested**: human plasma.


**Sample(s) Tested**: human serum.
**RAGE continued**

*Sample(s) Tested*: human plasma and serum.

**RBP4/Retinol-Binding Protein 4**

**Quantikine Human RBP4/Retinol-Binding Protein 4 ELISA**

Sensitivity: 0.628 ng/mL
Range: 1.56-100 ng/mL
Sample Volume: 20 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.
*Sample(s) Tested*: human plasma.

**Relaxin-2**

**Quantikine Human Relaxin-2 ELISA**

Sensitivity: 4.57 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
*Sample(s) Tested*: human serum.

**Resistin**

**Quantikine Human Resistin ELISA**

Sensitivity: 0.055 ng/mL
Range: 0.16-10 ng/mL
Sample Volume: 100 μL
Validated Sample Type(s): citrate, EDTA, heparin, serum.
*Sample(s) Tested*: human plasma.
*Sample(s) Tested*: human peripheral blood mononuclear cell culture supernate.
*Sample(s) Tested*: human serum.
*Sample(s) Tested*: human plasma.

*Sample(s) Tested*: human serum.

**Quantikine Mouse Resistin ELISA**

Catalog # MRSN00
Sensitivity: 8 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.
*Sample(s) Tested*: mouse serum.
*Sample(s) Tested*: mouse serum.
*Sample(s) Tested*: 3T3-L1 mouse embryonic fibroblast-derived adipocyte cell culture supernate.
*Sample(s) Tested*: mouse plasma (EDTA and heparin), mouse preadipocyte cell culture supernate.
*Sample(s) Tested*: mouse plasma (EDTA and heparin), mouse preadipocyte cell culture supernate.

**SCF/c-kit Ligand**

**Quantikine Human SCF/c-kit Ligand ELISA**

Catalog # DCK00
Sensitivity: 9 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.
*Sample(s) Tested*: human serum.
Han, Z.B. et al. (2008) Hypoxia-inducible factor (HIF)-1α directly enhances the transcriptional activity of stem cell factor (SCF) in response to hypoxia and epidermal growth factor (EGF). Carcinogenesis 29:1853.
*Sample(s) Tested*: MCF-7 human breast cancer cell culture supernate.
*Sample(s) Tested*: human lung mast cell culture supernate.
*Sample(s) Tested*: human melanoma cell culture supernate.

Sample(s) Tested: human serum.

**Quantikine Mouse SCF/c-kit Ligand ELISA**

Catalog # MCK00

Sensitivity: 5 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: homogenized mouse heart tissue, SI/S14 mouse fetal liver stromal fibroblast cell culture supernate.


Sample(s) Tested: mouse tumor culture supernate.


Sample(s) Tested: mouse plasma (heparin).


Sample(s) Tested: human serum.


Sample(s) Tested: human plasma.

**SCF R/c-kit**

**Quantikine Human Soluble SCF R/c-kit ELISA**

Catalog # DSCR00

Sensitivity: 0.339 ng/mL
Range: 0.125-50 ng/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: human serum.


Sample(s) Tested: human plasma.

---

**E-Selectin/CD62E**

**Quantikine Human Soluble E-Selectin/CD62E ELISA**

Catalog # DSLE00*

Sensitivity: 0.027 ng/mL
Range: 0.125-8 ng/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, heparin), serum.


Sample(s) Tested: human plasma (citrate).


Sample(s) Tested: human serum.

**Quantikine Mouse Soluble E-Selectin/CD62E ELISA**

Catalog # ME500

Sensitivity: 4.7 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: mouse serum.


Sample(s) Tested: homogenized mouse lung tissue.


Sample(s) Tested: mouse plasma.


Sample(s) Tested: homogenized mouse lung and liver tissue.


Sample(s) Tested: mouse plasma (citrate).

Sensitivity: 0.3 ng/mL
Range: 0.99-57 ng/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


P-Selectin/CD62P

Human Soluble P-Selectin/CD62P ELISA Catalog # BBE6

Sensitivity: 0.5 ng/mL
Range: 0.82-45 ng/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Quantikine Mouse Soluble P-Selectin/CD62P ELISA Catalog # MPS00

Sensitivity: 0.018 ng/mL
Range: 0.01-1.2 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


* Multipacks available For research use only. Not for use in diagnostic procedures unless otherwise indicated.
**Serpin E1/PAI-1**

**Quantikine Human Serpin E1/PAI-1 ELISA**

Catalog # DSE100

- **Sensitivity:** 0.142 ng/mL
- **Range:** 0.312-20 ng/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, cell lysate, plasma (citrate, CTAD, EDTA, heparin).


Sample(s) Tested: human mesangial cell culture supernate.


Sample(s) Tested: human plasma.

---

**SLPI**

**Quantikine Human SLPI ELISA**

Catalog # DPI00

- **Sensitivity:** 25 pg/mL
- **Range:** 62.5-4000 pg/mL
- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.


Sample(s) Tested: CaSkI human cervical cancer cell culture supernate.


Sample(s) Tested: human plasma.


Sample(s) Tested: human uterine epithelial cell culture supernate.


Sample(s) Tested: human vaginal fluid.


Sample(s) Tested: human neutrophil cell lysate.

---

**ST2/IL-1 R4**

**Quantikine Human ST2/IL-1 R4 ELISA**

Catalog # DST200

- **Sensitivity:** 33.5 pg/mL
- **Range:** 31.3-2000 pg/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.

---

**STAT2**

**Cell-Based ELISA Human Phospho-STAT2 (Y689)**

Catalog # KCB2890

- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** whole cells.

---

**STAT3**

**Cell-Based ELISA Human/Mouse Phospho-STAT3 (Y705)**

Catalog # KCB4607

- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** whole cells.

---

**STAT4**

**Cell-Based ELISA Human Phospho-STAT4 (Y693)**

Catalog # KCB4319

- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** whole cells.

---

**STAT5**

**Cell-Based ELISA Human/Mouse Phospho-STAT5 (Y699)**

Catalog # KCB4190

- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** whole cells.

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**STAT6**

**Cell-Based ELISA Human/Mouse Phospho-STAT6 (Y641)**

Catalog # KCB3717

- **Sample Volume:** 100 μL
- **Validated Sample Type(s):** whole cells.

---

**Substance P**

**Parameter Multispecies Substance P Assay**

Catalog # KGE007*

- **Sensitivity:** 43.8 pg/mL
- **Range:** 39-2500 pg/mL
- **Sample Volume:** 50 μL
- **Validated Sample Type(s):** cell culture supernate, plasma (heparin), saliva, serum, urine.


Sample(s) Tested: homogenized mouse trigeminal ganglia tissue.


Sample(s) Tested: human synovial fluid.
**Substance P continued**


Sample(s) Tested: rat dorsal horn spinal cord cell lysate.


Sample(s) Tested: homogenized mouse brain tissue.


Sample(s) Tested: NT2N human teratocarcinoma cell culture supernatant.

---

**Survivin**

Quantikine Human Survivin ELISA

Catalog # DSV00

Sensitivity: 9.96 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernatant, plasma (EDTA, heparin), serum, urine.


Sample(s) Tested: HeLa human cervical epithelial carcinoma cell culture supernatant.

Surveyor IC Human Total Survivin ELISA

Catalog # SUV647

Range: 62.5-4000 pg/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell lysate.

Testosterone

Parameter Multi-species Testosterone Assay

Catalog # KGE010*

Sensitivity: 0.041 ng/mL
Range: 0.041-10 ng/mL
Sample Volume: 100 μL
Validated Sample Type(s): cell culture supernatant, plasma (EDTA, heparin), serum.

TfR/Transferrin R

Quantikine IVD Human Soluble Tfr ELISA

Catalog # DTFR1

Sensitivity: 0.5 nmol/L
Range: 3-80 nmol/L
Sample Volume: 20 μL
Validated Sample Type(s): plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human plasma.


Sample(s) Tested: human serum.


Sample(s) Tested: human plasma.


Sample(s) Tested: human plasma.


Sample(s) Tested: human serum.

---

**TFPI**

Quantikine Human TFPI ELISA

Catalog # DTFP10

Sensitivity: 6.7 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernatant, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human serum.

**TGF-α**

Quantikine Human TGF-α ELISA

Catalog # DTGA00

Sensitivity: 7.1 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): breast milk, cell culture supernatant, plasma (EDTA, heparin), serum.


Sample(s) Tested: human serum.


Sample(s) Tested: 16HBE140 human bronchial epithelial cell culture supernatant.


Sample(s) Tested: KM12 human colon cancer cell culture supernatant.


Sample(s) Tested: human serum.
USA & Canada (800) 343-7475 | UK & Europe +44 (0)1235 529449 | China +86 (21) 52280373 | www.RnDSystems.com

ELISA REFERENCE GUIDE

TGF-β1

Quantikine Human TGF-β1 ELISA

Catalog # DB100B*

Sensitivity: 15.4 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA), serum, urine.


Sample(s) Tested: homogenized human colon tissue.


Sample(s) Tested: human peripheral blood mononuclear cell, mesenchymal stem cell, and corneal epithelial cell culture supernates.


Sample(s) Tested: human cartilage expansion and TMLC mink lung epithelial cell culture supernates.


Sample(s) Tested: human dendritic cell culture supernate.


Sample(s) Tested: homogenized human wound tissue.

Quantikine Mouse/Rat/Porcine/Canine TGF-β1 ELISA

Catalog # MB100B*

Sensitivity: 15.4 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: homogenized mouse lung tissue.


Sample(s) Tested: mouse serum, mouse peritoneal lavage.


Sample(s) Tested: mouse spleenocyte cell culture supernate.


Sample(s) Tested: mouse BALF.


Sample(s) Tested: mouse monocyte/T cell co-culture supernate.

TGF-β2

Quantikine Human TGF-β2 ELISA

Catalog # DB250*

Sensitivity: 7 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.


Sample(s) Tested: human vitreous humor.


Sample(s) Tested: human smooth muscle/lung mast cell co-culture supernate.


Sample(s) Tested: human retinal pigment epithelial cell culture supernate.


Sample(s) Tested: rat aqueous humor.


Sample(s) Tested: panc01, panc89, CAPAN-1, and Colo357 human pancreatic cancer cell culture supernates.

Thrombomodulin/CD141

Quantikine Human Thrombomodulin ELISA

Catalog # DTHBD0

Sensitivity: 27 pg/mL
Range: 62.5-4000 pg/mL
Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

DTHBD0

Sample(s) Tested: homogenized human wound tissue.

Thrombopoietin/Tpo

Quantikine Human Tpo ELISA

Catalog # DTP00B

Sensitivity: 18.5 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum.


Sample(s) Tested: human plasma.


Sample(s) Tested: human plasma.
**Thrombopoietin/Tpo continued**


Sample(s) Tested: human serum.


Sample(s) Tested: human plasma.


Sample(s) Tested: human serum.

---

**Quantikine Mouse Tpo ELISA**

Catalog #: MTP00

Sensitivity: 20 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.

---

**Thrombospondin-1**

**Quantikine Human Thrombospondin-1 ELISA**

Catalog #: DTSP10

Sensitivity: 0.944 ng/mL

Range: 7.81-500 ng/mL

Sample Volume: 50 μL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum.


Sample(s) Tested: human corneal epithelial cell, mesenchymal stem cell, and peripheral blood mononuclear cell culture supernates.

---

**Thrombospondin-2**

**Quantikine Human Thrombospondin-2 ELISA**

Catalog #: DTSP20

Sensitivity: 0.068 ng/mL

Range: 0.31-20 ng/mL

Sample Volume: 50 μL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), serum.

---

**Tie-1**

**Quantikine Human Tie-1 ELISA**

Catalog #: DTE100

Sensitivity: 0.21 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, cell lysates, plasma (EDTA, heparin), serum.

---

**Tie-2**

**Quantikine Human Tie-2 ELISA**

Catalog #: DTE200

Sensitivity: 0.066 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 100 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: bovine pericyte cell lysates.


Sample(s) Tested: human plasma.


Sample(s) Tested: human plasma (citrate).

---

**Cell-Based ELISA Human Phospho-Tie-2 (Y992)**

Catalog #: KCB2720

Sample Volume: 100 μL

Validated Sample Type(s): whole cells.

---

**Quantikine Mouse Tie-2 ELISA**

Catalog #: MTE200

Sensitivity: 40.2 pg/mL

Range: 125-8000 pg/mL

Sample Volume: 50 μL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.


Sample(s) Tested: mouse plasma.

Sample(s) Tested: mouse serum.

TIM-1/KIM-1/HAVCR

Quantikine Human TIM-1/KIM-1/HAVCR ELISA Catalog # DKM100
Sensitivity: 0.046 ng/mL
Range: 156-10 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.


Sample(s) Tested: mouse serum, homogenized mouse liver tissue.

Quantikine Rat TIM-1/KIM-1/HAVCR ELISA Catalog # RKM100
Sensitivity: 2.74 pg/mL
Range: 7.81-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenates, urine.


Sample(s) Tested: human serum.

TIMP-1

Quantikine Human TIMP-1 ELISA Catalog # DTM100*
Sensitivity: 0.08 ng/mL
Range: 0.156-10 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.


Sample(s) Tested: human serum.


Sample(s) Tested: human serum.


Sample(s) Tested: human hematopoietic stem cell culture supernate.

Quantikine Mouse TIMP-1 ELISA Catalog # MTM100
Sensitivity: 3.5 pg/mL
Range: 37.5-2400 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: mouse BALF.


Sample(s) Tested: mouse dendritic cell culture supernate.


Sample(s) Tested: homogenized mouse heart tissue.


Sample(s) Tested: homogenized mouse lung tissue.


Sample(s) Tested: mouse serum, homogenized mouse liver tissue.

Quantikine Rat TIMP-1 ELISA Catalog # RTM100*
Sensitivity: 4.5 pg/mL
Range: 37.5-2400 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: rat glomerular mesangial cell culture supernate.

Quantikine Human TIMP-2 ELISA Catalog # DTM200
Sensitivity: 0.064 ng/mL
Range: 0.156-10 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.


Sample(s) Tested: human serum.


Sample(s) Tested: human BALF.


Sample(s) Tested: human macrophage cell culture supernate.


Sample(s) Tested: human BALF.
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<td>Sample Volume: 200 μL</td>
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<td>Validated Sample Type(s): serum, plasma (citrate, EDTA, heparin).</td>
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<td>Sample(s) Tested: human gingival crevicular fluid.</td>
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<td>Sample(s) Tested: human plasma.</td>
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<td>Sample(s) Tested: human serum.</td>
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<td>Sample(s) Tested: human serum.</td>
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<td><strong>TNF-α</strong></td>
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<td><strong>Quantikine Canine TNF-α ELISA</strong></td>
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<td>Sample Volume: 100 μL</td>
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<td>Validated Sample Type(s): cell culture supernate, serum, plasma, EDTA, heparin, serum.</td>
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<td></td>
<td>Sample(s) Tested: human serum.</td>
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<td>Sample(s) Tested: HCC44, HCC461, HCC827, and H2009 human lung cancer cell supernatates.</td>
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<td>Sample(s) Tested: MCF-7 human breast cancer cell culture supernatate.</td>
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<td><strong>Quantikine Human TNF-α ELISA</strong></td>
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<td>Catalog # QTA00B</td>
<td>Sensitivity: 5.5 pg/mL</td>
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<td>Range: 15.6–1000 pg/mL</td>
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<td>Sample Volume: 200 μL</td>
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<td>Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.</td>
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<td>Sample(s) Tested: cell culture supernatate.</td>
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<td>Sample(s) Tested: human plasma.</td>
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* Multipacks available

For research use only. Not for use in diagnostic procedures unless otherwise indicated.

Sample(s) Tested: mouse serum.


Sample(s) Tested: mouse serum.


Sample(s) Tested: mouse macrophage and embryonic fibroblast cell culture supernates.

Quantikine Porcine TNF-α ELISA  Catalog # PTA00

Sensitivity: 5 pg/mL
Range: 23.4-1500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: porcine lamina propria lymphocyte cell culture supernate.


Sample(s) Tested: porcine cardiomyocyte cell lysate.


Sample(s) Tested: porcine serum, porcine BALF.


Sample(s) Tested: porcine serum.


Sample(s) Tested: porcine plasma.

Quantikine Rat TNF-α/TNFSF1A ELISA  Catalog # RTA00*

Sensitivity: 5 pg/mL
Range: 12.5-800 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


Sample(s) Tested: homogenized rat colon tissue.


Sample(s) Tested: homogenized rat liver tissue.


Sample(s) Tested: homogenized rat lung tissue.


Sample(s) Tested: rat vascular smooth muscle cell culture supernate.


Sample(s) Tested: homogenized rat lung tissue, rat serum.

Quantikine Rhesus Macaque TNF-α ELISA  Catalog # RHMTAO

Sensitivity: 6.2 pg/mL
Range: 15.6–1000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

TNF RI/TNFRSF1A

Quantikine Human Soluble TNF RI/TNFRSF1A ELISA  Catalog # DRT100*

Sensitivity: 1.2 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 200 μL
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.


Sample(s) Tested: human plasma (EDTA).


Sample(s) Tested: human plasma.


Sample(s) Tested: human TNF-R1 transfected COS7 and H9C2 cell culture supernates.


Sample(s) Tested: human plasma (EDTA).


Sample(s) Tested: human serum.

Quantikine Mouse Soluble TNF RI/TNFRSF1A ELISA  Catalog # MRT10

Sensitivity: 5 pg/mL
Range: 15.6–1000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, serum.


Sample(s) Tested: mouse serum.
TNF RI/TNFRSF1A continued


Sample(s) Tested: mouse serum.


Sample(s) Tested: RAW264.7 mouse macrophage cell culture supernate.


Sample(s) Tested: homogenized rat heart tissue.


Sample(s) Tested: mouse serum.

TNF RII/TNFRSF1B

Quantikine Human Soluble TNF RII/TNFRSF1B ELISA

Catalog # DRT200*

Sensitivity: 2.3 pg/mL.

Range: 7.8-500 pg/mL.

Sample Volume: 200 μL.

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.


Sample(s) Tested: human plasma (EDTA).


Sample(s) Tested: human saliva.

Ng, D.P. et al. (2008) Reduced GFR and albuminuria in Chinese type 2 diabetes mellitus patients are both independently associated with activation of the TNF-alpha system. Diabetologia 51:2318.

Sample(s) Tested: human serum.


Sample(s) Tested: human serum.


Sample(s) Tested: baboon plasma (EDTA).

Quantikine Mouse Soluble TNF RII/TNFRSF1B ELISA

Catalog # MRT20

Sensitivity: 5 pg/mL.

Range: 15.6-1000 pg/mL.

Sample Volume: 50 μL.

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


Sample(s) Tested: mouse serum.


Sample(s) Tested: RAW264.7 mouse macrophage cell culture supernate.


Sample(s) Tested: rat fibroblast cell culture supernate.


Sample(s) Tested: mouse lung lavage.


Sample(s) Tested: mouse serum.

TOR

Surveyor IC Human Phospho-TOR (S2448) ELISA

Catalog # SUV1665

Range: 156-10,000 pg/mL.

Sample Volume: 100 μL.

Validated Sample Type(s): cell lysate.

TRAIL/TNFSF10

Quantikine Human TRAIL/TNFSF10 ELISA

Catalog # DTRL00

Sensitivity: 7.87 pg/mL.

Range: 15.6-1000 pg/mL.

Sample Volume: 50 μL.

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (EDTA, heparin), saliva, serum.


Sample(s) Tested: human plasma (EDTA).


Sample(s) Tested: human conjunctival sac fluid, human serum, human saliva.


Sample(s) Tested: HCT116 human colorectal cancer cell culture supernate.


Sample(s) Tested: human mesenchymal stem cell culture supernate.


Sample(s) Tested: human cord blood mononuclear cell culture supernate.
### TRANCE/RANK L/TNFSF11

**Quantikine Mouse TRANCE/RANK L/TNFSF11 ELISA**  
**Catalog # MTR00**

- **Sensitivity:** 5 pg/mL  
- **Range:** 31.2-2000 pg/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, serum.

- **Sample(s) Tested:** mouse bone marrow osteoclast cell culture supernate.


- **Liu, J. et al. (2008)** Comparison of the effects of genistein and zoledronic acid on the bone loss in OPG-deficient mice. *Bone* **42:**950.

### TREM-1

**Quantikine Human TREM-1 ELISA**  
**Catalog # DTRM10B**

- **Sensitivity:** 30.6 pg/mL  
- **Range:** 62.5-4000 pg/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), saliva, serum.

- **Murakami, Y. et al. (2008)** Intervention of an inflammation amplifier, triggering receptor expressed on myeloid cells 1, for treatment of autoimmune arthritis. *Arthritis Rheum.* **58:**1332.

- **Sample(s) Tested:** mouse serum.

- **Beaufort, N. et al. (2009)** Inhibition of double-stranded RNA-induced TSLP in human keratinocytes by glucocorticoids. *Allergy* **64:**1231.

- **Sample(s) Tested:** human keratinocyte cell culture supernate.

### TSLP

**Quantikine Human TSLP ELISA**  
**Catalog # DTSLPO**

- **Sensitivity:** 6.3 pg/mL  
- **Range:** 7.8-500 pg/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.


- **Sample(s) Tested:** human serum.

### TrkA

**Cell-Based ELISA Rat Phospho-TrkA (Y785)**  
**Catalog # KCB5479**

- **Sample Volume:** 100 μL  
- **Validated Sample Type(s):** whole cells.

### uPAR

**Quantikine Human uPAR ELISA**  
**Catalog # DUP00**

- **Sensitivity:** 33 pg/mL  
- **Range:** 62.5-4000 pg/mL  
- **Sample Volume:** 50 μL  
- **Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum, urine.

**uPAR continued**


**Sample(s) Tested:** human BALF.


**Sample(s) Tested:** human placental explant cell culture supernate.


**Sample(s) Tested:** human FGF R4-transfected PNT1A human prostate cancer cell lysate.


**Sample(s) Tested:** human serum.

---

**VCAM-1/CD106**

**Quantikine Human Soluble VCAM-1/CD106 ELISA**

**Catalog # DVC00**

**Sensitivity:** 1.26 ng/mL

**Range:** 6.25-200 ng/mL

**Sample Volume:** 100 μl

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.


**Sample(s) Tested:** human plasma (EDTA).


**Sample(s) Tested:** human plasma (EDTA).


**Sample(s) Tested:** human plasma.


**Sample(s) Tested:** human plasma.


**Sample(s) Tested:** human plasma.

**Quantikine Mouse Soluble VCAM-1/CD106 ELISA**

**Catalog # MVC00**

**Sensitivity:** 0.06 ng/mL

**Range:** 0.31-20 ng/mL

**Sample Volume:** 50 μl

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


**Sample(s) Tested:** mouse plasma (EDTA).

---

**VEGF**

**Quantikine Canine VEGF ELISA**

**Catalog # CAVE00**

**Sensitivity:** 9.8 pg/mL (cell culture supernate), 19.5 pg/mL (serum/plasma)

**Range:** 15.6-1000 pg/mL (cell culture supernate), 31.2-2500 pg/mL (serum/plasma)

**Sample Volume:** 200 μl (cell culture supernate), 100 μl (serum/plasma)

**Validated Sample Type(s):** cell culture supernate, plasma (EDTA, heparin), serum.

**Quantikine Human VEGF ELISA**

**Catalog # DVE00**

**Sensitivity:** 5 pg/mL (cell culture supernate), 9 pg/mL (serum/plasma)

**Range:** 15.6-1000 pg/mL (cell culture supernate), 31.2-2000 pg/mL (serum/plasma)

**Sample Volume:** 200 μl (cell culture supernate), 100 μl (serum/plasma)

**Validated Sample Type(s):** cell culture supernate, serum, plasma (citrate, EDTA, heparin).


**Sample(s) Tested:** HH and SeAX human cutaneous T cell lymphoma cell culture supernates.


**Sample(s) Tested:** human acute myeloid leukemia blast cell lysate.


**Sample(s) Tested:** human plasma, human follicular fluid.


**Sample(s) Tested:** human plasma.


**Sample(s) Tested:** homogenized human muscle tissue.
Quantikine Human VEGF/PIGF Heterodimer ELISA  
Catalog # DVPH00
Sensitivity: 10.8 pg/mL
Range: 6.25-4000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sample(s) Tested: human plasma.

Quantikine Rat VEGF ELISA  
Catalog # RRV00
Sensitivity: 25 pg/mL
Range: 3.12-2000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sample(s) Tested: homogenized rat retina tissue.

QuantiGlo Chemiluminescent Human VEGF ELISA  
Catalog # QVE00B
Sensitivity: 5.99 pg/mL
Range: 6.4-20,000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.


QuantiGlo Chemiluminescent Human VEGF ELISA  
Catalog # QVE00B
Sensitivity: 5.99 pg/mL
Range: 6.4-20,000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.

Sample(s) Tested: MCF-7 human breast cancer cell culture supernate.

Sample(s) Tested: homogenized human breast cancer tissue.

Sample(s) Tested: homogenated mouse brain tissue.

Sample(s) Tested: rabbit bladder explant cell culture supernate.

Quantikine Mouse VEGF ELISA  
Catalog # MMV00*
Sensitivity: 3 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Sample(s) Tested: homogenized mouse cornea tissue.

Sample(s) Tested: homogenized mouse pancreas tissue.

Sample(s) Tested: mouse ocular fluid.

Sample(s) Tested: homogenized mouse brain tissue.

Sample(s) Tested: mouse peritoneal fluid.

Quantikine Human VEGF-C ELISA  
Catalog # DVEC00
Sensitivity: 48.4 pg/mL
Range: 10.9-7000 pg/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sample(s) Tested: human serum.

Sample(s) Tested: human sarcoma cell culture supernate.

Sample(s) Tested: human serum.

Sample(s) Tested: human plasma.

Sample(s) Tested: human mesenchymal stem cell culture supernate.
**VEGF-D**

**Quantikine Human VEGF-D ELISA**  
Catalog # DVED00

Sensitivity: 31.3 pg/mL  
Range: 125-4000 pg/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, plasma (EDTA), heparin, serum.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** human breast, lung, and colorectal carcinoma cell culture supernatants.


**Sample(s) Tested:** human plasma.


**Sample(s) Tested:** human breast, lung, and colorectal carcinoma cell culture supernatates.

Kümmel, S. et al. (2006) Changes in the circulating plasma levels of VEGF and VEGF-D after adjuvant chemotherapy in patients with breast cancer and 1 to 3 positive lymph nodes. Anticancer Res. 26:1719.

**Sample(s) Tested:** human plasma (EDTA).

---

**VEGF R1/Flt-1**

**Quantikine Human Soluble VEGF R1/Flt-1 ELISA**  
Catalog # DVR100B*

Sensitivity: 13.3 pg/mL  
Range: 31.2-20000 pg/mL  
Sample Volume: 100 μL  
Validated Sample Type(s): cell culture supernate, cell lysate, follicular fluid, plasma (EDTA), saliva, serum.


**Sample(s) Tested:** human serum, human cytotrophoblast cell culture supernate.


**Sample(s) Tested:** human villous explant cell culture supernate.


**Sample(s) Tested:** human serum.


**Sample(s) Tested:** human peripheral blood mononuclear cell culture supernate.


**Sample(s) Tested:** human serum, human follicular fluid.

---

**Quantikine Mouse Soluble VEGF R1/Flt-1 ELISA**  
Catalog # MVR100

Sensitivity: 15.2 pg/mL  
Range: 125-8000 pg/mL  
Sample Volume: 50 μL  
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.


**Sample(s) Tested:** mouse endothelial cell culture supernate.


**Sample(s) Tested:** mouse plasma.


**Sample(s) Tested:** homogenized mouse RPE-choroid complex tissue, b-END3 mouse brain-derived endothelial cell lysate.


**Sample(s) Tested:** mouse stem cell culture supernate.


**Sample(s) Tested:** rat neuron cell lysate.

---

**VEGF R2/KDR/Flk-1**

**Quantikine Human Soluble VEGF R2/KDR/Flk-1 ELISA**  
Catalog # DVR200*

Sensitivity: 11.4 pg/mL  
Range: 78.1-5000 pg/mL  
Sample Volume: 100 μL  
Validated Sample Type(s): cell culture supernate, cell lysate, plasma (EDTA), heparin, serum.


**Sample(s) Tested:** human endothelial cell lysate.


**Sample(s) Tested:** human plasma.


**Sample(s) Tested:** human plasma.


**Sample(s) Tested:** human plasma (EDTA).


**Sample(s) Tested:** human serum.

---

* Multipacks available  
For research use only. Not for use in diagnostic procedures unless otherwise indicated.
Quantikine Mouse Soluble VEGF R2 ELISA
Catalog # MVR200B

Sensitivity: 0.049 ng/mL
Range: 0.16-10 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Sample(s) Tested: mouse plasma.

Sample(s) Tested: b-END3 mouse brain-derived endothelial cell lysate, homogenized mouse RPE-choroid complex tissue.

Sample(s) Tested: homogenized mouse retina tissue.

Sample(s) Tested: mouse plasma.

Sample(s) Tested: rat cardiomyocyte cell culture supernate.

Vitamin D Binding Protein

Quantikine Human Vitamin D Binding Protein ELISA
Catalog # DVDB0

Sensitivity: 3.74 ng/mL
Range: 15.6-250 ng/mL
Sample Volume: 50 μL
Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.
DuoSet® ELISA Development Systems

Complete ELISA kits offer accurate and reproducible results without any development time required. However, when complete ELISA kits are not an option, R&D Systems DuoSets are an economical alternative to purchasing separate antibodies and proteins. DuoSet ELISA Development Systems contain a capture antibody, biotinylated detection antibody, streptavidin-HRP, and a protein standard. Please visit www.RnDSystems.com/go/DuoSet for more information.

Note: A basic understanding of immunoassay development is required for the successful use of these products. For complex sample matrices like serum and plasma, we strongly recommend our Quantikine line of fully validated, ready-to-run ELISA kits.

DuoSet IC (Intracellular) Assay Development Kits

DuoSet IC (Intracellular) Assay Development Systems offer a fast, sensitive, and economical method to detect and quantify intracellular factors involved in apoptosis, signal transduction, and transcription in cell lysates. Extensive validation work is done in-house to ensure specificity, and detailed protocols are provided. Kits are available in 2-, 5-, and 15-(96 well) plate pack sizes. Kit contents vary depending on the assay format. Please visit www.RnDSystems.com/go/DuoSetIC for more information.

ELISAs

The target protein, either total or phosphorylated, is sandwiched between an immobilized capture antibody and a biotinylated detection antibody. A signal is generated using streptavidin-HRP and substrate (substrate sold separately).

Phosphatase Activity Assays

The target phosphatase is bound by the capture antibody. The captured phosphatase liberates phosphate from the phosphopeptide substrate, and the free phosphate is measured by a change in color of Malachite Green.

Transcription Factor Activity Assays

The target active transcription factor binds biotinylated double-stranded oligonucleotide in solution. The complex is bound by an immobilized capture antibody and detected using streptavidin-HRP and substrate (substrate sold separately). Several DuoSet IC transcription factor assays can be converted to measure total (active and inactive) transcription factor protein (see product inserts for details).

Kinase Activity Assays

Kinase activity assays offer a highly specific and sensitive method for measuring endogenous kinase activity. The captured kinase phosphorylates the provided substrate, and phosphorylated substrate is assessed using colorimetric detection.
Multiplex Assays/Arrays

Proteome Profiler™ Antibody Arrays

In addition to our single analyte ELISA Kits, R&D Systems offers membrane- and microplate-based antibody arrays, and bead-based assays for profiling multiple proteins simultaneously in a single sample. R&D Systems Proteome Profiler Antibody Arrays offer a convenient method for detecting the relative levels of multiple proteins in a single sample using a two-site sandwich immunoassay principle. These antibody arrays are complete kits, and are available in membrane- and microplate-based formats.

Proteome Profiler Membrane-based Antibody Arrays

Proteome Profiler Membrane-based Antibody Arrays consist of a nitrocellulose membrane spotted in duplicate with a wide panel of up to 119 capture antibodies. Macroarrays of this type are ideal for profiling multiple proteins in a small number of samples utilizing standard chemiluminescent detection reagents and equipment. Please visit our website at www.RnDSystems.com/go/ProteomeProfiler for more information.

Proteome Profiler Membrane-based Antibody Arrays

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<td>Mouse Adipokine Array</td>
<td>ARY013</td>
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<td>Human Angiogenesis Array</td>
<td>ARY007</td>
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<td>Human Soluble Receptor Array, Non-hematopoietic Panel</td>
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**Assay Principle**

Multiple Proteins in Cell Culture Supernatants from Undifferentiated and Differentiated 3T3-L1 Cells Were Assessed Using the Mouse Adipokine Array. A. The Proteome Profiler Mouse Adipokine Array (Catalog # ARY013) was used to simultaneously assess the relative levels of 38 obesity-related proteins in cell culture supernatants from undifferentiated 3T3-L1 mouse preadipocytes (top) and differentiated 3T3-L1 adipocytes (bottom). B. Histogram profiles for select proteins were generated by quantifying the mean spot pixel density from the arrays using image analysis software.
Proteome Profiler 96 Microplate-based Antibody Arrays

Proteome Profiler 96 Microplate-based Arrays allow up to 16 different signaling proteins to be monitored simultaneously in a single well of a 96-well microplate. Each well is pre-spotted with a carefully selected panel of capture antibodies and combines the exquisite sensitivity of the traditional sandwich ELISA with the high-throughput capabilities of a multiplex panel. Chemiluminescent substrate reagents and a suitable camera imaging system† are used to determine the intensity of light emitted from individual spots. Microplate-based arrays require smaller sample sizes and are more amenable to large-scale studies that monitor a specific set of cellular proteins. Free software is available for simplified data collection. Please visit our website at www.RnDSystems.com/go/ProteomeProfiler96 for additional information and instructional videos.

Assay Principle

**Assay Principle**

[Diagram of Assay Principle]

**Assay Principle**

**PRODUCT** | **DESCRIPTION** | **CATALOG #**
--- | --- | ---
Human Phospho-RTK Array 1 | 16-plex RTK Array | ARZ001
- EGF R - ErbB2 - ErbB3 - ErbB4 - HGF R - IGF-1 R - IGF-2 R - IRS-1 - M-CSF R - EGF R - PDGF R- 
- SCF R - Tie-2 - VEGF R1 - VEGF R2 - VEGF R3

Human Phospho-RTK Array 2 | Breast Cancer 8-plex RTK Array | ARZ002
- EGF R - EphB4 - ErbB2 - ErbB3 - ErbB4 - HGF R - IGF-1 R - MSP R

Human Phospho-RTK Array 3 | Angiogenesis 8-plex RTK Array | ARZ003
- EphB4 - PDGF Rcx - PDGF R-1 - Tie-1 - Tie-2 - VEGF R1 - VEGF R2 - VEGF R3

†Compatible imaging systems tested by R&D Systems include Quansys Bioscience Q-View™ Imaging, Alpha Innotech FluorChem® HR2 and FCZ, BioRad VersaDoc™ 4000 and ChemiDoc™ XR; FujiFilm LAS-3000 or LAS-3000 Mini; Aushan BiSystems: SearchLight™ Imaging.

A.

**A.**

Untreated

NRG1-β1

RS ErbB3

ErbB2

ErbB4

RS

NRG1-β1

RS ErbB3

ErbB2

ErbB4

RS

**B.**

<table>
<thead>
<tr>
<th>Phospho-ErbB2</th>
<th>Phospho-ErbB3</th>
<th>Phospho-ErbB4</th>
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<tbody>
<tr>
<td>Mean Pixel Density (×10²)</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Untreated</td>
<td>NRG1-β1</td>
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</tbody>
</table>

NRG1-β1 Induces Phosphorylation of ErbB Family Receptors in Breast Cancer Cells. A. Lysates from NRG1-β1-treated (Catalog # 396-HB) MDA-MB-453 human breast cancer cell line were examined for the phosphorylation of 16 different receptor tyrosine kinases (RTKs) using the Proteome Profiler 96 Human Phospho-RTK Antibody Array 1 (Catalog # ARZ001). RS=Reference Spot. B. Histogram profiles for RTKs exhibiting significant phosphorylation were generated from mean spot pixel densities.

**Detection of Insulin-induced Receptor Tyrosine Kinase Phosphorylation using the Proteome Profiler 96 Phospho-RTK Antibody Array 1.**

A. The Proteome Profiler 96 Human Phospho-RTK Antibody Array 1 (Catalog # ARZ001) was used to simultaneously assess the phosphorylation of 16 different receptor tyrosine kinases in lysates from HepG2 human hepatocellular liver carcinoma cells that were either untreated or treated with insulin for 5 minutes. Images of the wells are shown. RS=Reference Spot. B. Histogram profiles for select proteins were generated by quantifying the mean spot pixel densities from individual antibody spots using analytical software.

For research use only. Not for use in diagnostic procedures unless otherwise indicated.
Mosaic™ ELISA

The Mosaic ELISA Kit is a 96-well microplate-based multiplex immunoassay that allows for the simultaneous quantification of 8 cytokines in a single sample of cell culture supernatant, serum, or plasma. Each kit contains a microplate that has been pre-spotted in each well with multiple capture antibodies that specifically recognize the target analytes. Utilizing the specificity of the traditional two-site sandwich immunoassay and chemiluminescent substrate reagents, a signal proportional to the amount of cytokine bound to each individual capture antibody is produced. Plates can be read using several common chemiluminescence camera systems.* The Mosaic ELISA provides an excellent alternative to performing multiple traditional ELISA experiments.

**Mosaic ELISA Kit**

<table>
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<tr>
<th>PRODUCT</th>
<th>DESCRIPTION</th>
<th>CATALOG #</th>
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<tr>
<td>Mosaic Human Cytokine Panel 1 8-plex Cytokine Array</td>
<td>MEA001</td>
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<tr>
<td>CD40L, IFN-γ, IL-1β, IL-6, IL-8, IL-17, TNF-α</td>
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</tbody>
</table>

*Compatible imaging systems tested by R&D Systems include Quansys Bioscience Q-View® Imager, Alpha Innotech FluorChem® H2000 and H200, BioRad® VersaDoc™ 4000 and ChemiDoc™ XR; Fujifilm LAS-3000 or LAS-3000 Mini; Avlon BioSystems SearchLight® Imager.

A.

**MEA001 Well Map**

**Standard Curve**

**Treatment Time**

0 hours | 4 hours | 7.5 hours | 24 hours | 48 hours | 72 hours

B.

**IL-1α**

**IL-1β**

**IL-6**

**Simultaneous Detection of Multiple Analytes using the Mosaic ELISA Human Cytokine Panel.** Human peripheral blood mononuclear cells were treated with PHA for the indicated times (n=5 for each time point), Aliquots of cell culture supernatants were removed and the Mosaic ELISA Human Cytokine Panel 1 (Catalog # MEA001) was used to simultaneously quantify the levels of eight different cytokines.

A. A graphic depicting the spot layout in each well (left) and representative images of the wells from the standard curve and the time course experiment (right) are shown. PBMC supernatants were diluted 1:64 to ensure that the values for all of the analytes fell within the standard curve. The reference spot in each well (lower right) provides a strong positive signal for template alignment during data analysis.

B. Histogram profiles for three analytes were generated by analysis of the mean spot pixel densities of individual spots in each well.
Fluorokine® MAP

Fluorokine MultiAnalyte Profiling (MAP) Kits use the Luminex® platform and have the capability of measuring the levels of multiple proteins in a single small sample. Please visit www.RnDSystems.com/go/FMAP for more information.

- Human Adhesion Molecule Panel
- Human Angiogenesis Panel A
- Human Cytokine Panel A
- Human Cytokine Panel B
- Human MMP Panel
- Human Obesity Panel
- Mouse Cytokine Panel
- Rat Cytokine Panel

Luminex is a registered trademark of Luminex Corp.

Simultaneous Measurement of Multiple Primate Biomarkers in Serum Samples. The concentrations of multiple proteins were simultaneously assessed in samples of normal primate serum using the Primate Fluorokine MultiAnalyte Profiling 11-Plex Kit (Catalog # LKT006). Data are presented as the mean ± the standard deviation (n=30). IL-2 and IFN-γ were detected in 8% of the samples, TNF-α was detected in 15% of the samples, and the others were detected in greater than 95% of the samples.

Simultaneous Measurement of Angiogenesis-related Biomarkers in Human Serum Samples. Protein levels were assessed using the Fluorokine MAP Angiogenesis Base Kit (Catalog # LAN000) and the indicated bead sets. Data are presented as the mean ± the standard deviation (n=15).
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* Multipacks available  For research use only. Not for use in diagnostic procedures unless otherwise indicated.