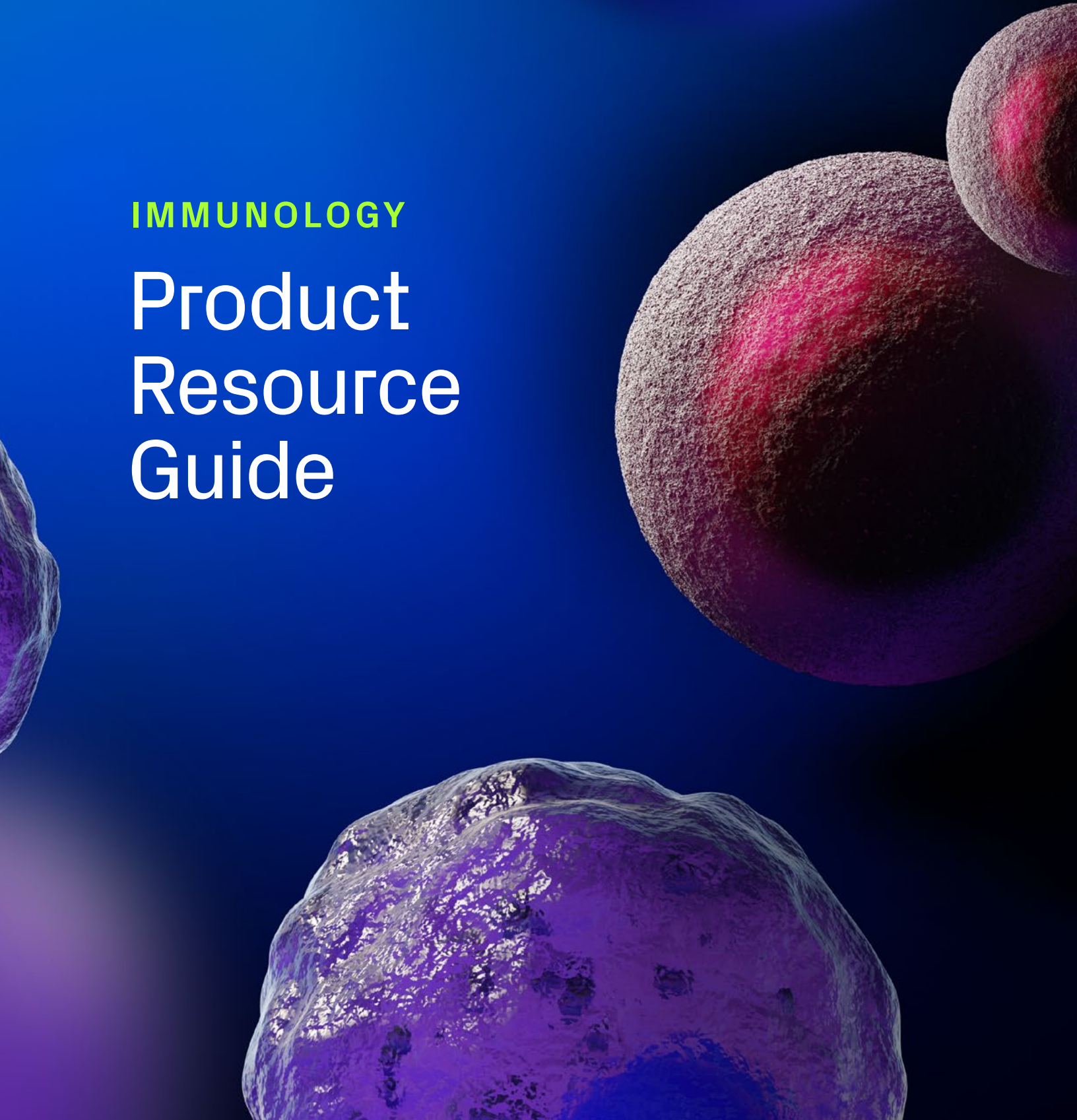
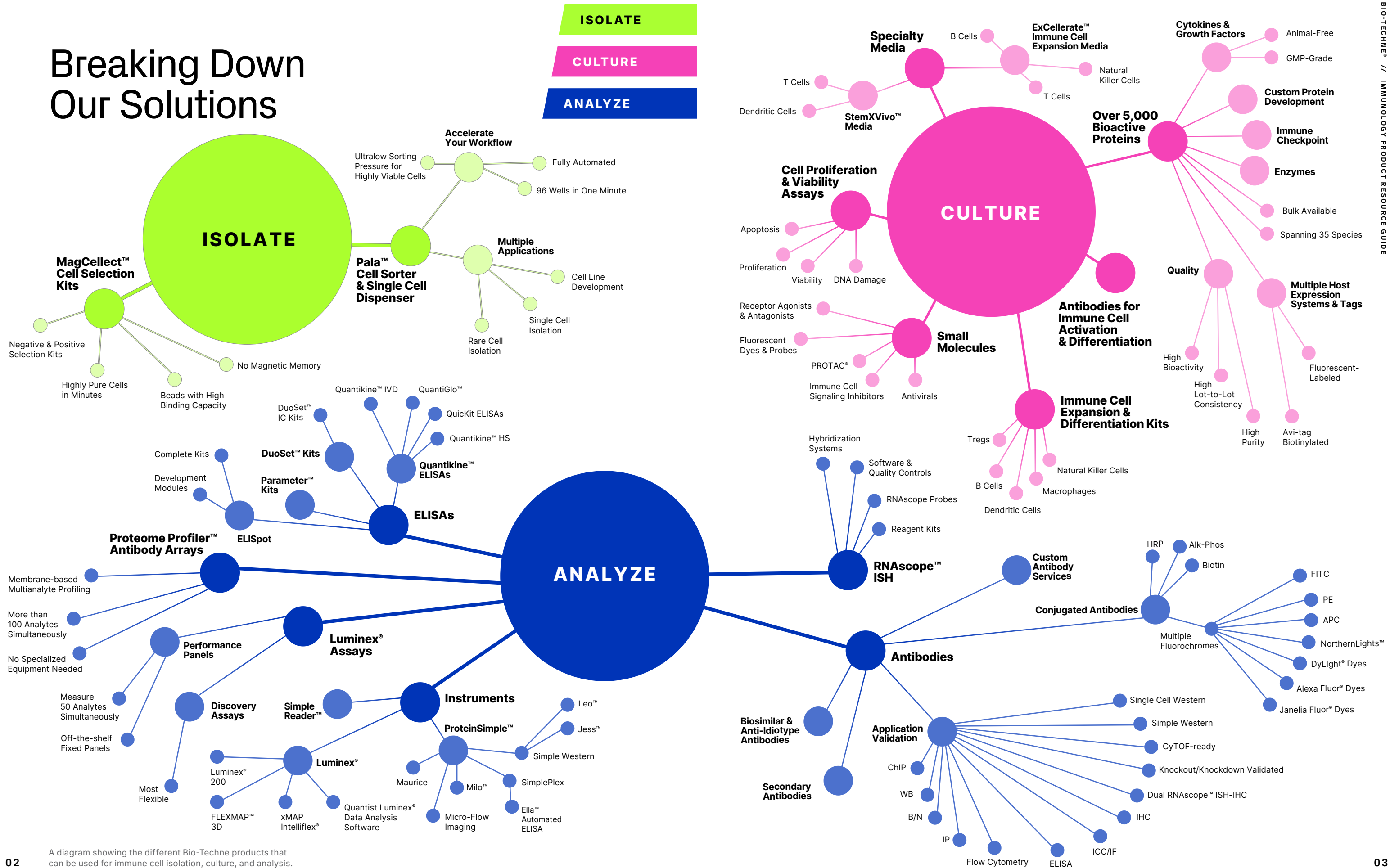


IMMUNOLOGY

Product Resource Guide



Breaking Down Our Solutions



IMMUNOLOGY

Product Resource Guide

Immunology research is focused on characterizing different immune cell types, their functions, and the molecules that regulate their activities. This is essential for understanding how the immune system protects a host against invading pathogens and the mechanisms that may lead to immune cell dysfunction under pathological conditions.

Bio-Techne provides world class reagents, assays, and instruments to help advance immunology research. From natural killer cells and macrophages to dendritic cells and T cells, we offer products for isolating, culturing, and analyzing different immune cell types and cell type-specific subsets. We also provide a wide selection of reagents for investigating the mechanisms that regulate different immune cell functions. In addition to our reagents for basic research, we continue to expand our selection of innovative tools for cell therapy manufacturing, making it easier for scientists to transition their research from discovery to the clinic.

ISOLATE

Pala™ Cell Sorter & Single Cell Dispenser

Whether you are cloning transfected single cells, isolating a specific cell population, or finding rare immune cells, the compact and incredibly simple to use Pala single cell dispenser allows you to gently sort single cells or target cell populations in any lab.

- **Fast and efficient:** Industry-leading speed for single cell sorting and dispensing in a single step
- **User-friendly:** Designed for simplicity and ease of use through full automation
- **Gentle on cells:** Ensures gentle handling to preserve cell viability and integrity



Explore Pala

Scan the QR code or Visit bio-techne.com/pala



CULTURE

ExCellerate™ Media

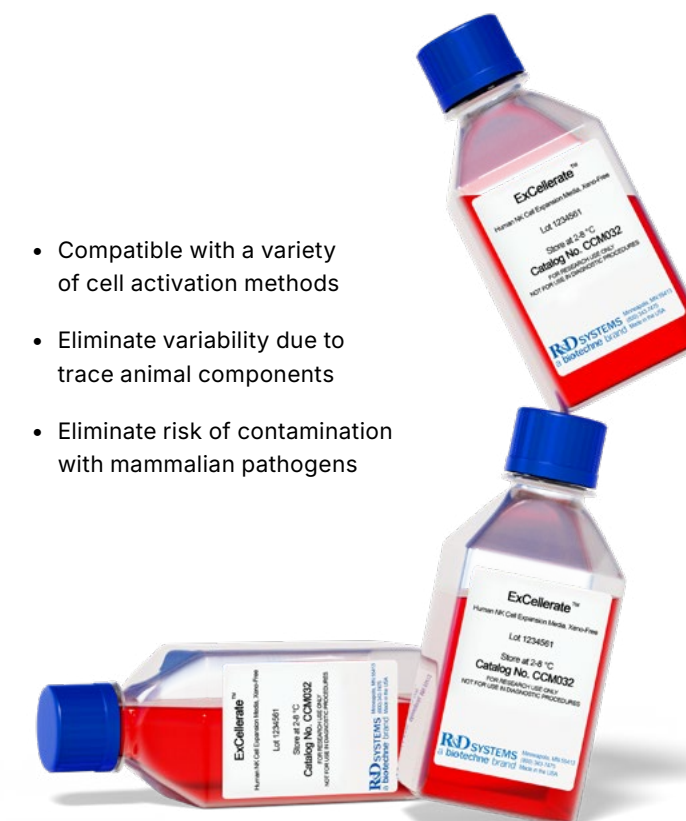
Achieve more consistent cell culture performance and robust T cell, NK cell, or B cell expansion with our ExCellerate Media. These xeno-free media provide a step toward defined cell culture conditions, delivering high yields with minimal variability.

- Compatible with a variety of cell activation methods
- Eliminate variability due to trace animal components
- Eliminate risk of contamination with mammalian pathogens



Learn More or Request a Sample

Scan the QR code or Visit bio-techne.com/reagents/cell-culture-reagents/excellerate

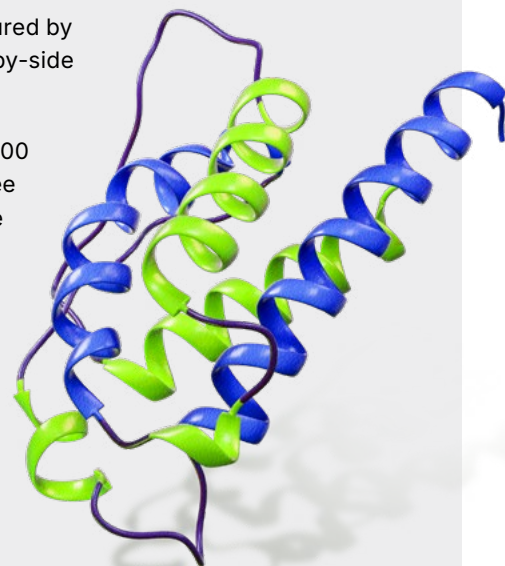


CULTURE

R&D Systems™ Proteins

Optimize your immune cell cultures with R&D Systems proteins. Our proteins provide superior performance and lot-to-lot consistency so you can have confidence in their ability to promote robust immune cell expansion and differentiation with minimal variability between cultures.

- Stringent quality control specifications for bioactivity, purity, and endotoxin
- Lot-to-lot consistency ensured by testing each new lot side-by-side with previous lots
- Selection includes over 5,000 research-grade, Animal-free preclinical, and GMP-grade proteins to meet all your research needs



Learn More

Scan the QR code or Visit bio-technne.com/reagents/proteins

Control Variables & **SAVE** with Bulk Reagents

Receive competitive discounts on bulk quantities of a single item or multiple items in one order.

Cost Savings:

As the quantity of the item(s) in your order increases, the price decreases

Curated Selection:

More than 5,000 recombinant proteins, 425,000 R&D Systems™ and Novus Biologicals™ antibodies, 1,600 ELISA products, and 3,500 Tocris™ small molecules are available

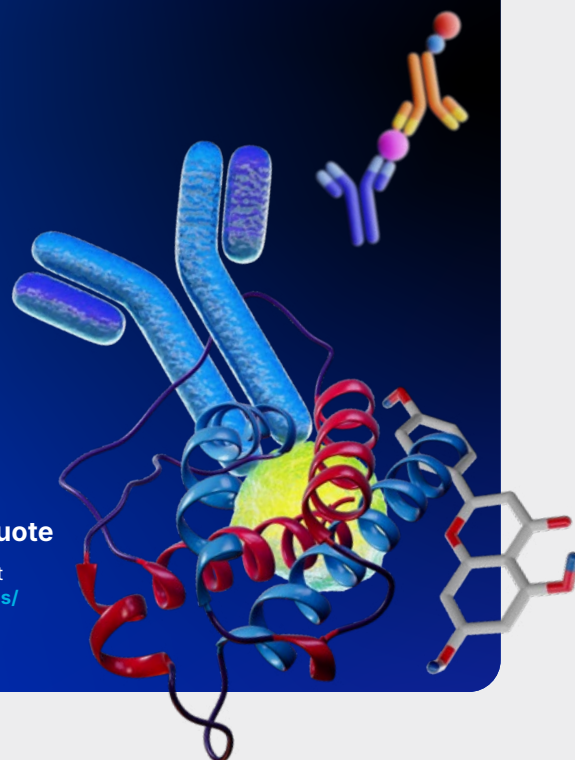
Supply Chain Reliability:

Our manufacturing expertise ensures that we can provide you with a stable supply of the reagents you need



Request a Bulk Quote

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CULTURE

Antibodies

Utilize research use only or GMP antibodies from our R&D Systems™ or Novus Biologicals™ brands for immune cell activation or differentiation. From anti-CD3 and CD28 antibodies to anti-IFN- γ , IL-4, and IL-12 antibodies, we have the reagents you need for your cell culture experiments. Additionally, we offer over 1,400 antibodies validated for blocking/neutralization that can be used to investigate different protein functions.

- Extensive in-house validation and expert product support to ensure performance
- Data images, citations, reviews, and a 100% satisfaction guarantee enable customers to have confidence that our antibodies will work in the applications and species designated
- Our antibodies are manufactured to ensure low endotoxin levels



Learn More

Scan the QR code or Visit bio-technne.com/reagents/antibodies

Custom Services

When your work demands unique reagents or scientific support, turn to the product development experts behind Bio-Techne's trusted brands.

Together with a dedicated project manager, our scientists, quality assurance, and world-class technical support teams will deliver custom proteins, antibodies, ELISA Kits, or Luminex® Panels precisely tailored to meet your experimental needs.

→ Common services include **proteins**, **antibodies**, or **ELISAs assays made from scratch**, unique conjugations, specific buffer formulations, and custom bottling or pack sizes



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→ Custom reagents provide **specificity, long-term consistency**, and **a guaranteed supply**, while saving you development time

→ Custom reagents can be **produced in large quantities** with regulatory support



ANALYZE

R&D Systems™ ELISA Kits

Analyze the cytokine secretion profiles of different immune cell types and have confidence in your results with our rigorously validated ELISA Kits.

With more than 30 years of experience designing and optimizing quantitative immunoassays, you can trust our immunoassays will deliver publishable, reproducible data every time. Our immunoassay selection includes the 3 different ELISA formats listed below.

Quantikine™ ELISA Kits

- Optimized reagents and diluents for accurate sample values
- Extensively tested for long-term consistency and reproducibility
- Fully validated sample types

QuicKit™ ELISA Kits

- Data generated in 90 minutes
- Quantikine quality with lot-to-lot consistency and reproducibility
- Simplified protocol – only one wash step

DuoSet™ ELISA Development Reagents

- Carefully selected and validated matched antibody pairs for optimal performance
- Large menu – more than 1000 targets with novel targets across multiple species
- Adaptable for use across multiple platforms and 384 well



Learn More

Scan the QR code or Visit bio-technne.com/elisa



ANALYZE

Simple Reader™ Compact ELISA Plate Reader

Empower every lab member with their own compact, reliable microplate reader featuring 96 individual detection units and seamless plug-and-play functionality, perfect for any location.

- **4 LED Light Sources:** 450 nm, 490 nm, 540 nm, 595 nm

- **90 Detection Units:** Consistent and robust results
- **Fast Read Time:** Analyze data quickly with under 5 seconds per plate read



Learn More

Scan the QR code or Visit bio-technne.com/SimpleReader



ANALYZE

Ella™ Automated ELISA Platform

Boost your productivity with Ella, an automated benchtop ELISA platform designed to deliver accurate, reproducible data with no manual steps. Simple Plex™ assays run on the Ella platform are fully validated, highly sensitive, and can quantify up to 8 analytes simultaneously in less than 90 minutes.

- Superior precision and reproducibility with results in less than 90 minutes
- Fully validated, sub-picograms sensitivity with up to 4 logs of dynamic range
- Choose from 350+ targets spanning human, mouse, rat, and non-human primate species



Learn More

Scan the QR code or Visit bio-technne.com/ella



ANALYZE

Luminex® Panels

Luminex Panels are bead-based multiplex assays that enable you to multiplex up to 50 analytes, conserving on sample, time, and cost. Select from more than 490 targets spanning human, mouse, rat, porcine, and non-human primate species.

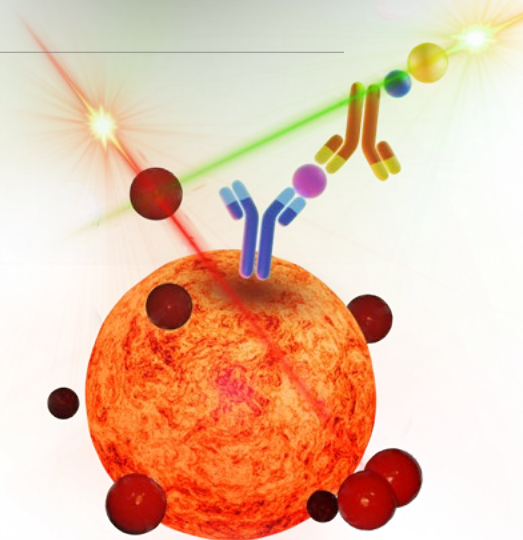
Our Luminex Assays include the 3 different formats listed below.

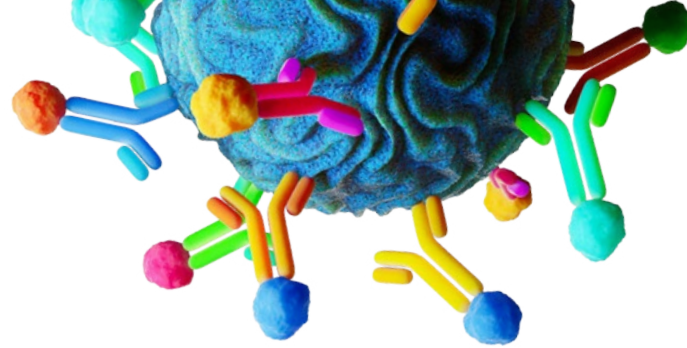
- **Discovery Assays:** Mix and match analyte customization
- **Fixed High Performance Panels:** Fully stocked and ready to ship
- **Configurable High Performance Panels:** Choose from a selection of the analytes or the entire panel



Learn More

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ANALYZE

Antibodies

Discover our comprehensive selection of fluorochrome-conjugated R&D Systems™ and Novus Biologicals™ primary antibodies for flow cytometry, immunohistochemistry, immunocytochemistry, and more.

Hundreds of unique, world-renowned clones, many of which have been used to establish CD nomenclature through HLDA workshops, are available from the R&D Systems brand, while the Novus Biologicals brand provides an expansive collection of both proprietary antibodies and some of the most highly referenced antibody clones on market.

Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR. DyLight® is a registered trademark of Thermo Fisher Scientific, Inc. and its subsidiaries. Janelia Fluor® is a registered trademark of the Howard Hughes Medical Institute.

- Expansive portfolio of unconjugated antibodies and a selection of 28 fluorochromes are available, including a series of AlexaFluor®, DyLight® and Janelia Fluor® dyes
- Validated for specificity and reproducibility in over 25 species for more than 15 applications
- 100% guaranteed to work in the application and species listed



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ANALYZE

RNAscope™ *In Situ* Hybridization

Spatially map and quantify specific RNAs in individual intact cells and tissues using RNAscope *in situ* hybridization assays. This technology can be combined with immunohistochemistry (IHC) or immunofluorescence (IF) on the same slide to detect target RNAs and proteins simultaneously.

- Detect up to 12 RNA targets in FFPE tissues and 48 targets in fixed and frozen tissues using the RNAscope HiPlex assay
- Proprietary probe design ensures target specific binding and provides a high signal-to-noise ratio
- Catalog probes are available for over 40,000 targets in 400+ species with made-to-order target probes ready in 2 weeks



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ANALYZE

Simple Western™ Automated Western Systems

Simple Western technology streamlines and automates western analysis by integrating it into a fully automated capillary system. Using capillary electrophoresis for protein separation, followed by an immunoassay-based detection, Simple Western instruments provide more accurate and standardized quantitative data compared to traditional Western blotting.

- Fully automated Western analysis
- Reproducible and quantitative protein analytics in about 3 hours from as little as 3 µL of sample
- High sensitivity multiplex with industry-leading sensitivity in chemiluminescence and fluorescence channels



Learn More

Scan the QR code or Visit bio-techne.com/simplewestern





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Analytical Instruments, and Precision Diagnostics.

INCLUDES R&D Systems™ Novus Biologicals™ Tocris Bioscience™ ProteinSimple™ ACD™ ExosomeDx™ Asuragen™ Lunaphore™