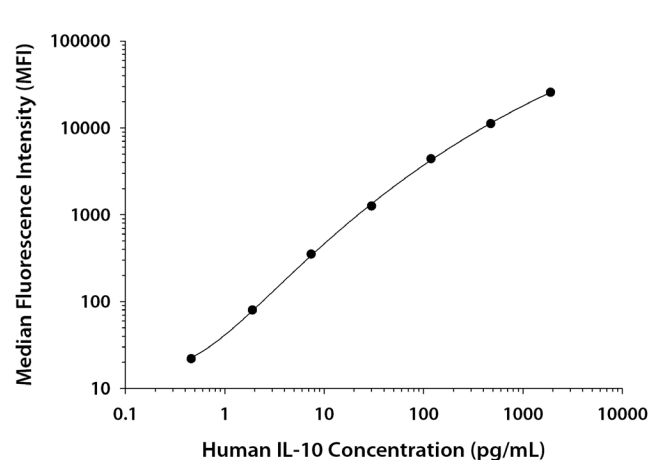


- Recommended Sample Types** • Serum, EDTA plasma, and heparin plasma.
- Microparticle Region** • Region-27
- Components**
  - Microparticle Concentrate (Part 894496) is supplied as a 50X concentrated stock (0.075 mL) with preservatives.
  - Biotin-Antibody Concentrate (Part 894053) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.
- Other Supplies Required**
  - Magnetic Luminex® Performance Assay Human High Sensitivity Cytokine Base Kit A (R&D Systems®, Catalog # LHSCM000).
- Storage**
  - Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
  - **Avoid freezing microparticles.**
  - **Protect microparticles from light.**
- Instructions for Use**
  - Refer to the appropriate Base Kit insert for the Magnetic Luminex® Performance Assay procedure.

**TYPICAL DATA**

This human IL-10 standard curve is provided only for demonstration. A standard curve must be generated each time an assay is run, utilizing values from the Standard Value Card included in the Base Kit.

When using Calibrator Diluent RD6-40, a seven point standard curve (0.46-1900 pg/mL) is recommended.



Standard	(pg/mL)	MFI	Average	Corrected
Blank	0	81 84	82	—
1	1900	25,765 25,866	25,816	25,734
2	475	11,004 11,546	11,275	11,193
3	119	4495 4507	4501	4419
4	30	1343 1348	1346	1264
5	7.4	432 437	434	352
6	1.9	161 165	163	81
7	0.46	104 104	104	22

**PERFORMANCE CHARACTERISTICS**

All data were collected with assays run as a multiplex.

Data obtained with polystyrene and magnetic beads were equivalent.

Twenty-one assays were evaluated, and the minimum detectable dose (MDD) of human IL-10 ranged from 0.066-0.671 pg/mL. The mean MDD was 0.211 pg/mL.

The MDD was determined by adding two standard deviations to the MFI of twenty zero standard replicates and calculating the corresponding concentration.

## PRECISION

**Intra-assay Precision** (precision within an assay) - Three samples of known concentration were tested twenty times on one plate to assess intra-assay precision.

**Inter-assay Precision** (precision between assays) - Three samples of known concentration were tested in sixty separate assays to assess inter-assay precision.

Sample	Intra-Assay Precision			Inter-Assay Precision		
	1	2	3	1	2	3
n	20	20	20	60	60	60
Mean (pg/mL)	4.1	29	594	4.0	29	602
Standard deviation	0.3	1.1	31	0.5	2.8	61
CV (%)	7.3	3.8	5.2	12.5	9.7	10.1

## RECOVERY

Samples containing and/or spiked with human IL-10 were evaluated for recovery.

Sample Type	Average % Recovery	Range
Serum	109	81-129%
EDTA plasma	105	86-132%
Heparin plasma	104	85-125%

## LINEARITY

Samples containing and/or spiked with human IL-10 were serially diluted to evaluate assay linearity.

		Serum	EDTA plasma	Heparin plasma
1:2	Average % of Expected	101	95	95
	Range (%)	99-102	82-101	83-100
1:4	Average % of Expected	100	94	95
	Range (%)	94-106	78-106	76-105
1:8	Average % of Expected	104	94	95
	Range (%)	99-109	77-109	72-113

## SPECIFICITY

**Note:** Refer to the base kit insert for a complete list of analytes tested for cross-reactivity and interference.

This assay recognizes natural and recombinant human IL-10.

## TECHNICAL HINTS

- Protect the microparticles and streptavidin-PE from light at all times.
- Refer to the Base Kit Standard Value Card for reconstitution volume and values of the reconstituted standard.
- Diluted microparticles cannot be stored. Make a fresh dilution of microparticles each time the assay is run.
- The use of a magnetic device made to accommodate a microplate is necessary for washing.
- Discrepancies may exist in values obtained for the same analyte utilizing different technologies.

Magnetic Luminex® Performance Assays afford the user the benefit of multi-analyte analysis of cytokines in a complex sample. A single, multipurpose diluent for each sample type is used to optimize recovery, linearity, and reproducibility. Such a multipurpose, single diluent may not optimize any single analyte to the same degree that a unique diluent selected for analysis of that analyte can optimize conditions. Therefore, some performance characteristics may be more variable than those for assays designed specifically for single analyte analysis.

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