Magnetic Luminex® Performance Assay
Human IL-10 High Sensitivity Kit

Catalog Number: LHSCM217
Pack Size: 100 Tests

SPECIFICATIONS AND USE

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 (Catalog Number 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 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.

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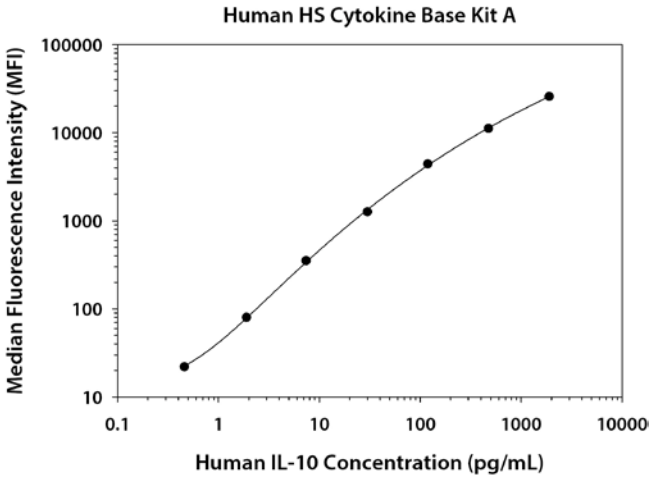

Standard	pg/mL	MFI	Average	Corrected
Blank	0	81 84	83	——
1	1900	25,765 25,866	25,816	25,733
2	475	11,004 11,546	11,275	11,192
3	119	4495 4507	4501	4418
4	30	1343 1348	1346	1263
5	7.4	432 437	435	352
6	1.9	161 165	163	80
7	0.46	104 104	104	22

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PRECISION

Intra-assay Precision (precision within an assay)
Three samples of known concentration were tested twenty times on one plate to assess precision within an assay.
Inter-assay Precision (precision between assays)
Three samples of known concentration were tested in separate assays to assess precision between assays.

	Intra-assay Precision			Inter-assay Precision		
Sample	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 & LINEARITY

Samples were spiked with human IL-10 and evaluated for recovery and were serially diluted to evaluate assay linearity.

Recovery			Linearity				
Sample Type	Average % Recovery	Range (%)			Serum	EDTA Plasma	Heparin Plasma
Serum	107	81-129	1:2	Average % of Expected	101	95	95
				Range (%)	99-102	82-101	83-100
EDTA plasma	105	86-132	1:4	Average % of Expected	100	94	95
				Range (%)	94-106	78-106	76-105
Heparin plasma	104	85-125	1:8	Average % of Expected	104	94	95
				Range (%)	99-109	77-109	72-113

SENSITIVITY

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.

CORRELATION

This assay has been correlated to the Quantikine® ELISA Kit with a slope of 0.9-1.1 and an R^2 value greater than 0.9.

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 appropriate 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 multianalyte 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.