Magnetic Luminex® Performance Assay
Human IL-2 High Sensitivity Kit

Catalog Number: LHSCM202
Pack Size: 100 Tests

SPECIFICATIONS AND USE

Recommended Sample Types
- **Human HS Cytokine Base Kit A:** Serum, EDTA plasma, and heparin plasma.
- **Human HS Cytokine Base Kit B:** Cell culture supernates, serum, EDTA plasma, and heparin plasma.

Microparticle Region
- Region-19

Components
- Microparticle Concentrate (Part 894491) is supplied as a 50X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 894048) 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) or Magnetic Luminex Performance Assay Human High Sensitivity Cytokine Base Kit B (Catalog Number LBHS000).

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.**

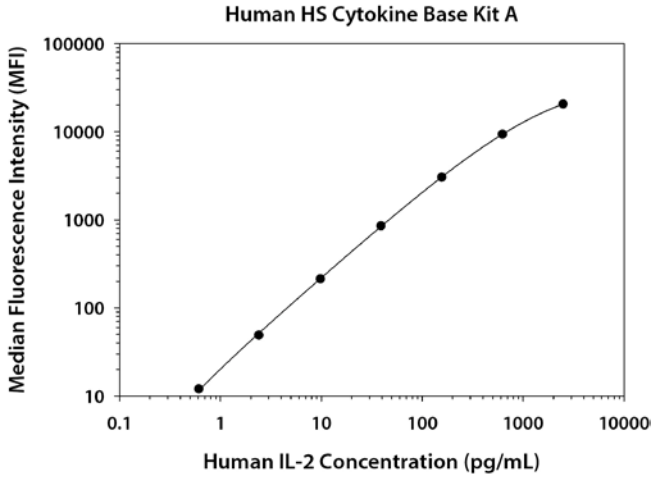
Instructions for Use
- Refer to the appropriate Base Kit insert for the Magnetic Luminex Performance Assay procedure.

TYPICAL DATA

This human IL-2 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.

Human HS Cytokine Base Kit A: *When using Calibrator Diluent RD6-40, a seven point standard curve (0.61-2500 pg/mL) is recommended.*

Human HS Cytokine Base Kit B: *When running cell culture supernate samples using Calibrator Diluent RD5K, a six-point standard curve (1.18-1213 pg/mL) is recommended. When running serum/plasma samples using Calibrator Diluent RD6-65, a seven-point standard curve (1.18-4850 pg/mL) is recommended.*



Standard	pg/mL	MFI	Average	Corrected
Blank	0	25 25	25	——
1	2500	20,743 20,637	20,690	20,665
2	625	9440 9341	9390	9365
3	156	3076 3046	3061	3036
4	39	880 873	877	852
5	9.8	238 238	238	213
6	2.4	75 73	74	49
7	0.61	36 38	37	12

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.

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1-800-343-7475

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)	5.2	38	852	4.9	37	869
Standard Deviation	0.4	1.5	54	0.5	3.3	84
% CV	7.7	3.9	6.3	10.2	8.9	9.7

RECOVERY & LINEARITY

Samples were spiked with human IL-2 and evaluated for recovery and were serially diluted to evaluate assay linearity.

Recovery		
Sample Type	Average % Recovery	Range (%)
Cell culture supernates*	103	98-111
Serum	96	68-119
EDTA plasma	92	66-115
Heparin plasma	101	71-129

Linearity					
		Cell culture supernates*	Serum	EDTA Plasma	Heparin Plasma
1:2	Average % of Expected	99	104	100	97
	Range (%)	98-100	95-114	96-110	89-110
1:4	Average % of Expected	96	103	101	96
	Range (%)	94-98	90-122	89-118	89-113
1:8	Average % of Expected	98	105	100	96
	Range (%)	96-101	94-130	93-116	88-107

*Cell culture supernates are valid samples in Human HS Cytokine Base Kit B only.

SENSITIVITY

All data were collected with assays run as a multiplex.
Data obtained with polystyrene and magnetic beads were equivalent.

Twenty-eight assays were evaluated, and the minimum detectable dose (MDD) of human IL-2 ranged from 0.05-0.28 pg/mL. The mean MDD was 0.13 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-2.

Recombinant equine IL-2 cross-reacts approximately 0.32% in this assay.

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.

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