



# Magnetic Luminex® Performance Assay Human IL-5 High Sensitivity Kit

**Catalog Number:** LHSCM205

**Pack Size:** 100 Tests

## SPECIFICATIONS AND USE

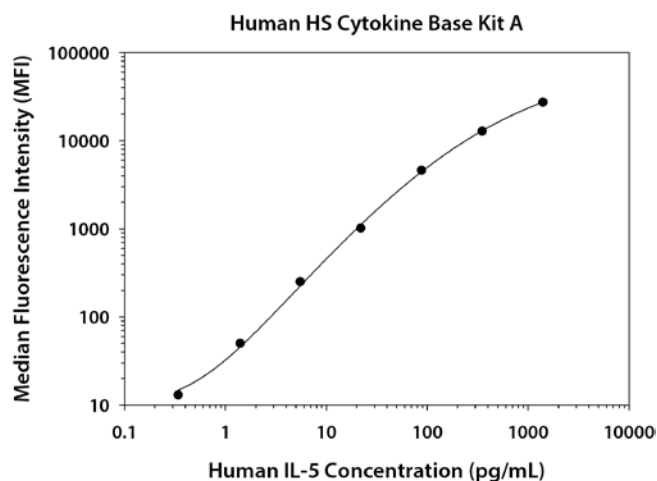
- |                                 |   |
|---------------------------------|---|
| <b>Recommended Sample Types</b> | <ul style="list-style-type: none"><li>• <b>Human HS Cytokine Base Kit A:</b> Serum, EDTA plasma, and heparin plasma.</li><li>• <b>Human HS Cytokine Base Kit B:</b> Cell culture supernates, serum, EDTA plasma, and heparin plasma.</li></ul>  |
| <b>Microparticle Region</b>     | <ul style="list-style-type: none"><li>• Region-22</li></ul>   |
| <b>Components</b>               | <ul style="list-style-type: none"><li>• Microparticle Concentrate (Part 894493) is supplied as a 50X concentrated stock (0.075 mL) with preservatives.</li><li>• Biotin-Antibody Concentrate (Part 894050) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.</li></ul> |
| <b>Other Supplies Required</b>  | <ul style="list-style-type: none"><li>• 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).</li></ul>                                  |
| <b>Storage</b>                  | <ul style="list-style-type: none"><li>• Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.</li><li>• <b>Avoid freezing microparticles.</b></li><li>• <b>Protect microparticles from light.</b></li></ul>   |
| <b>Instructions for Use</b>     | <ul style="list-style-type: none"><li>• Refer to the appropriate Base Kit insert for the Magnetic Luminex Performance Assay procedure.</li></ul>  |

## TYPICAL DATA

This human IL-5 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 (0.34-1400 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 (0.513-525 pg/mL) is recommended. When running serum/plasma samples using Calibrator Diluent RD6-65, a seven-point standard curve (0.513-2100 pg/mL) is recommended.



Standard	pg/mL	MFI	Average	Corrected
Blank	0	18 19	19	—
1	1400	25,545 29,253	27,399	27,380
2	350	12,379 13,310	12,845	12,826
3	88	4566 4708	4637	4618
4	22	1012 1059	1036	1017
5	5.5	266 271	269	250
6	1.4	68 69	69	50
7	0.34	31 32	32	13

## 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)	3.0	21	440	2.8	22	445
Standard Deviation	0.2	0.7	32	0.4	2.0	53
% CV	6.7	3.3	7.3	14.3	9.1	11.9

## RECOVERY & LINEARITY

Samples were spiked with human IL-5 and evaluated for recovery and were serially diluted to evaluate assay linearity.

Recovery			Linearity					
Sample Type	Average % Recovery	Range (%)			Cell culture supernates*	Serum	EDTA Plasma	Heparin Plasma
Cell culture supernates*	104	94-113	1:2	Average % of Expected	100	109	104	108
				Range (%)	97-102	104-115	95-118	104-112
Serum	85	67-108	1:4	Average % of Expected	101	116	108	111
				Range (%)	100-102	105-126	100-117	105-120
EDTA plasma	84	62-105	1:8	Average % of Expected	104	117	106	106
				Range (%)	101-106	109-124	95-115	100-115
Heparin plasma	88	67-145	*Cell culture supernates are valid samples in Human HS Cytokine Base Kit B only.					

\*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-5 ranged from 0.03-0.12 pg/mL. The mean MDD was 0.06 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<sup>2</sup> 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-5.

## 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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