



Magnetic Luminex® Performance Assay Human IL-13 High Sensitivity Kit

Catalog Number: LBHS213

Pack Size: 100 Tests

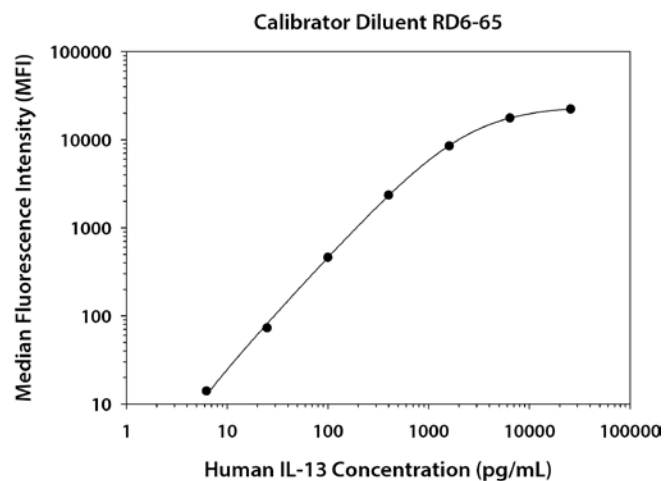
SPECIFICATIONS AND USE

- Recommended Sample Types**
- Cell culture supernates, serum, EDTA plasma, and heparin plasma.
- Microparticle Region**
- Region-34
- Components**
- Microparticle Concentrate (Part 894474) is supplied as a 50X concentrated stock (0.075 mL) with preservatives.
 - Biotin-Antibody Concentrate (Part 894482) 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 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 Base Kit insert for the Magnetic Luminex Performance Assay procedure.

TYPICAL DATA

This human IL-13 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.

Note: When running cell culture supernate samples using Calibrator Diluent RD5K, a six-point standard curve (6.25-6400 pg/mL) is recommended. When running serum/plasma samples using Calibrator Diluent RD6-65, a seven-point standard curve (6.25-25,600 pg/mL) is recommended.



Standard	pg/mL	MFI	Average	Corrected
Blank	0	21 22	22	—
1	25,600	22,353 22,248	22,301	22,279
2	6400	17,612 17,815	17,714	17,692
3	1600	8499 8572	8536	8514
4	400	2362 2382	2372	2350
5	100	481 484	483	461
6	25	94 96	95	73
7	6.25	35 36	36	14

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

R&D Systems, Inc.
1-800-343-7475

PRECISION

Intra-assay Precision (precision within an assay)

Three samples of known concentration were tested 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.

Assays were performed by at least three technicians using two lots of components.

	Intra-assay Precision			Inter-assay Precision		
Sample	1	2	3	1	2	3
n	20	20	20	43	43	43
Mean (pg/mL)	60.0	673	7637	61.9	699	7040
Standard Deviation	0.998	6.49	315	8.68	63.5	743
% CV	1.7	1.0	4.1	14.0	9.1	10.6

RECOVERY & LINEARITY

Samples were spiked with human IL-13 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	113	102-123	1:2	Average % of Expected	99	95	88	100
				Range (%)	96-102	91-99	82-91	94-105
Serum	117	95-130	1:4	Average % of Expected	98	89	79	96
				Range (%)	96-100	79-93	74-83	89-107
EDTA plasma	109	102-117	1:8	Average % of Expected	95	89	74	94
				Range (%)	92-99	74-95	68-81	83-114
Heparin plasma	115	103-125						

SENSITIVITY

All data were collected with assays run as a multiplex.

Twenty-one assays were evaluated, and the minimum detectable dose (MDD) of human IL-13 ranged from 0.141-2.01 pg/mL. The mean MDD was 0.983 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 R² 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-13.

Recombinant rabbit IL-1 β cross-reacts approximately 1.1% in this assay.

Recombinant rhesus macaque IL-1 β cross-reacts approximately 0.97% 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.

All trademarks and registered trademarks are the property of their respective owners.