Magnetic Luminex® Performance Assay
Human IL-7 High Sensitivity Kit

Catalog Number: LBHS207
Pack Size: 100 Tests

SPECIFICATIONS AND USE

Recommended Sample Types
- Cell culture supernates, serum, and EDTA plasma.
  Note: *Heparin plasma is not suitable for use with IL-7.*

Microparticle Region
- Region-33

Components
- Microparticle Concentrate (Part 894473) is supplied as a 50X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 894481) 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).

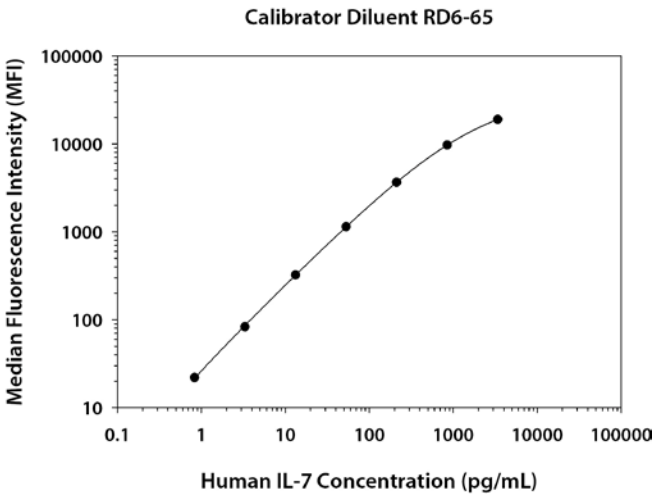
Storage
- Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
- **Avoid freezing microparticles.**
- **Protect microparticles from light.**

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

TYPICAL DATA

This human IL-7 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 (0.828-848 pg/mL) is recommended. When running serum/plasma samples using Calibrator Diluent RD6-65, a seven-point standard curve (0.828-3390 pg/mL) is recommended.*



Standard	pg/mL	MFI	Average	Corrected
Blank	0	27 26	27	——
1	3390	18,841 19,122	18,982	18,955
2	848	9639 9795	9717	9690
3	212	3675 3678	3677	3650
4	53	1159 1176	1168	1141
5	13.2	348 352	350	323
6	3.31	109 111	110	83
7	0.828	48 50	49	22

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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)	6.07	66.3	673	6.28	70.5	621
Standard Deviation	0.156	1.28	14.1	0.865	7.32	67.4
% CV	2.6	1.9	2.1	13.8	10.4	10.9

RECOVERY & LINEARITY

Samples were spiked with human IL-7 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
Cell culture supernates	108	96-116	1:2	Average % of Expected	98	100	98
				Range (%)	95-102	97-103	74-106
Serum	94	78-99	1:4	Average % of Expected	98	102	96
				Range (%)	96-101	93-110	89-100
EDTA plasma	90	83-101	1:8	Average % of Expected	97	101	93
				Range (%)	94-101	87-113	84-101

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-7 ranged from 0.032-0.140 pg/mL. The mean MDD was 0.078 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® HS 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-7.

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.