Magnetic Luminex® Performance Assay
Human IL-31 High Sensitivity Kit

Catalog Number: LBHS2824
Pack Size: 100 Tests

SPECIFICATIONS AND USE

Recommended Sample Types
- Cell culture supernates, serum, EDTA plasma, and heparin plasma.

Microparticle Region
- Region-42

Components
- Microparticle Concentrate (Part 894480) is supplied as a 50X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 894488) 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).

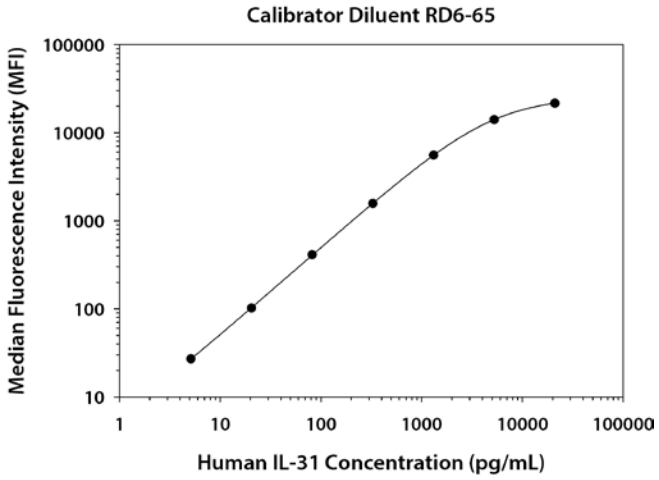
Storage
- Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
- **Avoid freezing microparticles.**
- **Protect microparticles from light.**

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

TYPICAL DATA

This human IL-31 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 (5.13-5250 pg/mL) is recommended. When running serum/plasma samples using Calibrator Diluent RD6-65, a seven-point standard curve (5.13-21,000 pg/mL) is recommended.*



Standard	pg/mL	MFI	Average	Corrected
Blank	0	16 18	17	——
1	21,000	21,439 21,811	21,625	21,608
2	5250	14,036 14,136	14,086	14,069
3	1313	5547 5595	5571	5554
4	328	1580 1594	1587	1570
5	82	425 432	428	411
6	20.5	118 119	119	102
7	5.13	43 44	44	27

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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)	51.6	582	6705	59.6	671	6345
Standard Deviation	1.08	9.85	159	10.1	87.1	801
% CV	2.1	1.7	2.4	17.0	13.0	12.6

RECOVERY & LINEARITY

Samples were spiked with human IL-31 and evaluated for recovery and were serially diluted to evaluate assay linearity.

Recovery		
Sample Type	Average % Recovery	Range (%)
Cell culture supernates	98	89-104
Serum	108	97-114
EDTA plasma	106	95-120
Heparin plasma	110	95-118

Linearity					
		Cell culture supernates	Serum	EDTA Plasma	Heparin plasma
1:2	Average % of Expected	113	93	100	100
	Range (%)	110-115	88-111	96-103	96-104
1:4	Average % of Expected	114	93	93	96
	Range (%)	111-117	78-108	88-101	85-106
1:8	Average % of Expected	113	91	87	90
	Range (%)	107-118	75-109	80-102	74-107

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-31 ranged from 0.113-1.17 pg/mL. The mean MDD was 0.433 pg/mL.

The MDD was determined by adding two standard deviations to the MFI of twenty zero standard replicates and calculating the corresponding concentration.

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-31.

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.