



Magnetic Luminox® Performance Assay Human IL-1β/IL-1F2 High Sensitivity Kit

Catalog Number: LHSCM201

Pack Size: 100 Tests

SPECIFICATIONS AND USE

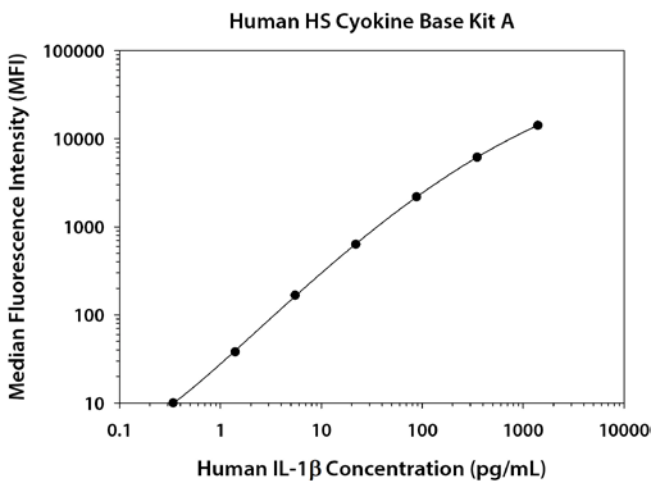
- Recommended Sample Types**
- **Human HS Cytokine Base Kit A:** Serum, EDTA plasma, and heparin plasma.
 - **Human HS Cytokine Base Kit B:** Cell culture supernates, serum, EDTA plasma, and heparin plasma.
- Microparticle Region**
- Region-20
- Components**
- Microparticle Concentrate (Part 894490) is supplied as a 50X concentrated stock (0.075 mL) with preservatives.
 - Biotin-Antibody Concentrate (Part 894047) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.
- Other Supplies Required**
- Magnetic Luminox Performance Assay Human High Sensitivity Cytokine Base Kit A (Catalog Number LHSCM000) or Magnetic Luminox 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 Luminox Performance Assay procedure.

TYPICAL DATA

This human IL-1β 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 (1.04-1060 pg/mL) is recommended. When running serum/plasma samples using Calibrator Diluent RD6-65, a seven-point standard curve (1.04-4240 pg/mL) is recommended.



Standard	pg/mL	MFI	Average	Corrected
Blank	0	16 17	17	—
1	1400	14,192 14,238	14,215	14,198
2	350	6046 6288	6167	6150
3	88	2193 2214	2204	2187
4	22	646 651	649	632
5	5.5	183 185	184	167
6	1.4	54 55	55	38
7	0.34	26 27	27	10

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.

Sample	Intra-assay Precision			Inter-assay Precision		
	1	2	3	1	2	3
n	20	20	20	60	60	60
Mean (pg/mL)	2.5	19.0	558	3.1	24	523
Standard Deviation	0.1	0.7	46	0.5	3.0	52
% CV	4.0	3.7	8.2	16.1	12.5	9.9

RECOVERY & LINEARITY

Samples were spiked with human IL-1 β 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*	106	94-113	1:2	Average % of Expected	101	110	101	100
				Range (%)	99-102	101-125	87-109	86-109
Serum	100	79-130	1:4	Average % of Expected	101	113	105	102
				Range (%)	99-104	102-128	86-117	86-108
EDTA plasma	99	80-120	1:8	Average % of Expected	101	115	99	103
				Range (%)	98-103	108-119	85-107	90-115
Heparin plasma	100	75-132						

*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-1 β ranged from 0.03-0.18 pg/mL. The mean MDD was 0.08 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-1 β .

Recombinant feline IL-1 β cross-reacts approximately 3.77% in this assay.

Recombinant rabbit IL-1 β cross-reacts approximately 74.9% in this assay.

Recombinant rhesus macaque IL-1 β cross-reacts approximately 70.6% in this assay.

Recombinant human IL-1 RII interferes at concentrations > 25.0 ng/mL 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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