



Magnetic Luminex® Performance Assay Human IL-5 Kit

Catalog Number: LUHM205

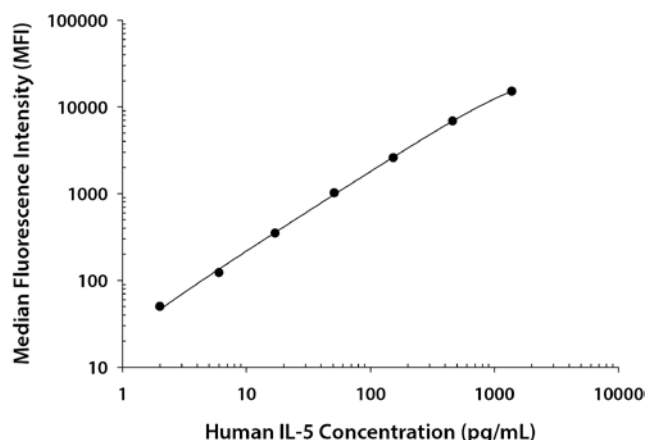
Pack Size: 100 Tests

SPECIFICATIONS AND USE

- Recommended Sample Types**
- Cell culture supernates, serum, EDTA plasma, and heparin plasma.
- Microparticle Region**
- Region-26
- Components**
- Microparticle Concentrate (Part 894435) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
 - Biotin-Antibody Concentrate (Part 892621) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.
- Other Supplies Required**
- Magnetic Luminex Performance Assay Human Base Kit A (Catalog Number LUHM000).
- 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 Luminex Performance Assay procedure.

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.



Standard	pg/mL	MFI	Average	Corrected
Blank	0	11 11	11	—
1	1380	15,048 15,214	15,131	15,120
2	460	6847 6906	6877	6866
3	153	2563 2657	2610	2599
4	51	1007 1055	1031	1020
5	17	357 364	361	350
6	6	130 138	134	123
7	2	60 61	61	50

PERFORMANCE CHARACTERISTICS

All data were collected with assays run as a multiplex.

Data obtained with polystyrene and magnetic beads were equivalent.

Sensitivity - The Minimum Detectable Dose (MDD) was determined by adding two standard deviations to the MFI of twenty zero standard replicates and calculating the corresponding concentration.

Thirty assays were evaluated, and the MDD of human IL-5 ranged from 0.05-0.71 pg/mL. The mean MDD was 0.33 pg/mL.

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 twenty separate assays to assess precision between assays.

	Intra-assay Precision				Inter-assay Precision		
Sample	1	2	3		1	2	3
n	20	20	20		20	20	20
Mean (pg/mL)	312	827	1194		62	315	822
Standard Deviation	15	53	58		5.9	25	37.4
% CV	4.8	65	4.9		9.5	7.9	4.5

Recovery and Linearity – Samples containing and/or spiked with high concentrations of IL-5 were 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	100	83-110	1:2	Average % of Expected	99	98	114	97
				Range (%)	85-116	76-109	101-125	88-104
Serum	106	100-117	1:4	Average % of Expected	93	96	119	103
				Range (%)	86-108	81-113	92-131	94-114
EDTA plasma	92	66-105	1:8	Average % of Expected	98	99	124	102
				Range (%)	80-116	86-117	99-141	98-108
Heparin plasma	103	88-116						

Specificity - This assay recognizes natural and recombinant human IL-5. The assay was tested for cross-reactivity and interference with the following factors. Less than 0.5% cross-reactivity and interference was observed.

Recombinant human:			Recombinant mouse:		Recombinant rat:	Recombinant porcine:	Recombinant human multiplex partners:	
6Ckine	IL-1 RII	IL-17	G-CSF	IL-8	GM-CSF	GM-CSF	ENA-78	IL-8
CNTF	IL-2 R α	IL-18	GM-CSF	IL-10	IFN- γ	IL-1 α	FGF basic	IL-10
β -ECGF	IL-2 R β	LIF	IFN- γ	IL-17	IL-1 α	IL-1 β	G-CSF	IL-17
FGF acidic	IL-2 R γ	LIF R	IL-1 α	MIP-1 α	IL-1 β	IL-2	GM-CSF	MCP-1
FGF-4	IL-3 R α	MIP-1 α	IL-1ra	MIP-1 β	IL-2	IL-4	IFN- γ	MIP-1 α
FGF-5	IL-4 R	MIP-3 α	IL-1	RANTES	IL-4	IL-6	IL-1 α	MIP-1 β
FGF-6	IL-5 R α	MIP-3 β	IL-2	Tpo	IL-6	IL-8	IL-1 β	RANTES
FGF-9	IL-6 R	MCP-2	IL-4	TNF- α	IL-10	IL-10	IL-1ra	Tpo
FGF-10	IL-10 R	MCP-3	IL-5	VEGF	TNF- α	Leptin	IL-2	TNF- α
FGF-18	IL-3	MCP-4	IL-6			TNF- α	IL-4	VEGF
GCP-2	IL-7	M-CSF					IL-6	
GRO α	IL-9	TNF RI						
GRO β	IL-11	TNF- α						
GRO γ	IL-12 p40	VEGF ₁₂₁						
I-309	IL-12 p70	VEGF ₁₆₅						
IGF-I	IL-13	VEGF-D						
IGF-II	IL-15							
IL-1 RI	IL-16							

TECHNICAL HINTS

- Protect the microparticles and streptavidin-PE from light at all times.
- Refer to the 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.

Luminex Performance Assays afford the user the benefit of multianalyte analysis of biomarkers in a complex sample. For each sample type, a single, multipurpose diluent is used to optimize recovery, linearity, and reproducibility. Such a multipurpose 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.