Magnetic Luminex® Performance Assay Human IL-17 Kit

Catalog Number: LUHM317
Pack Size: 100 Tests

SPECIFICATIONS AND USE

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

Microparticle Region
- Region-30

Components
- Microparticle Concentrate (Part 894439) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 892626) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.

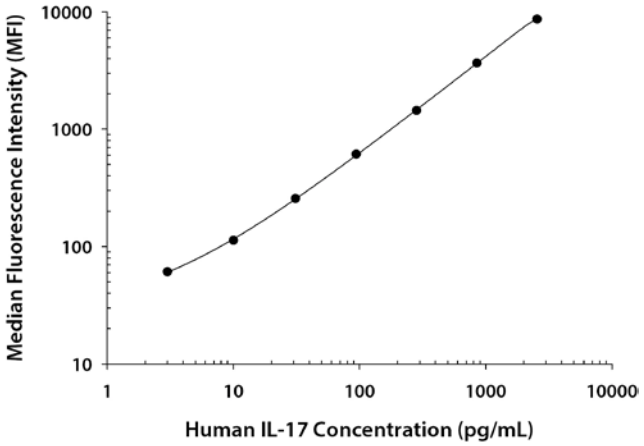
Other Supplies Required
- Magnetic Luminex Performance Assay Human Base Kit A (Catalog Number LUHM000).

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-17 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	20 20	20	——
1	2550	8658 8703	8681	8661
2	850	3633 3681	3657	3637
3	283	1436 1452	1444	1424
4	94	605 620	613	593
5	31	254 259	257	237
6	10	112 113	113	93
7	3	60 62	61	41

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-17 ranged from 0.13-1.10 pg/mL. The mean MDD was 0.39 pg/mL.

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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)	274	502	954	256	480	915
Standard Deviation	9.9	26.9	51	19	38.4	74
% CV	3.6	5.3	5.3	7.6	8.0	8.1

Recovery and Linearity – Samples containing and/or spiked with high concentrations of IL-17 were evaluated for recovery and were serially diluted to evaluate assay linearity.

Recovery		
Sample Type	Average % Recovery	Range (%)
Cell culture supernates	100	89-111
Serum	105	89-116
EDTA plasma	96	78-120
Heparin plasma	92	76-104

Linearity					
		Cell culture supernates	Serum	EDTA Plasma	Heparin Plasma
1:2	Average % of Expected	96	103	109	99
	Range (%)	88-105	96-111	94-123	91-108
1:4	Average % of Expected	97	100	109	97
	Range (%)	82-113	90-115	97-121	94-103
1:8	Average % of Expected	99	103	106	101
	Range (%)	85-122	95-114	94-116	93-108

Specificity - This assay recognizes natural and recombinant human IL-17. 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-18	G-CSF	IL-8	GM-CSF	GM-CSF	ENA-78	IL-6
CNTF	IL-2 Rα	LIF	GM-CSF	IL-10	IFN-γ	IL-1α	FGF basic	IL-8
β-ECGF	IL-2 Rβ	LIF R	IFN-γ	IL-17	IL-1α	IL-1β	G-CSF	IL-10
FGF acidic	IL-2 Rγ	MIP-1α	IL-1α	MIP-1α	IL-1β	IL-2	GM-CSF	MCP-1
FGF-4	IL-3 Rα	MIP-3α	IL-1ra	MIP-1β	IL-2	IL-4	IFN-γ	MIP-1α
FGF-5	IL-4 R	MIP-3β	IL-1	RANTES	IL-4	IL-6	IL-1α	MIP-1β
FGF-6	IL-5 Rα	MCP-2	IL-2	Tpo	IL-6	IL-8	IL-1β	RANTES
FGF-9	IL-6 R	MCP-3	IL-4	TNF-α	IL-10	IL-10	IL-1ra	Tpo
FGF-10	IL-10 R	MCP-4	IL-5	VEGF	TNF-α	Leptin	IL-2	TNF-α
FGF-18	IL-3	M-CSF	IL-6			TNF-α	IL-4	VEGF
GCP-2	IL-7	TNF RI					IL-5	
GROα	IL-9	TNF-α						
GROβ	IL-11	$VEGF_{121}$						
GROγ	IL-12 p40	$VEGF_{165}$						
I-309	IL-12 p70	VEGF-D						
IGF-I	IL-13							
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 multi-analyte 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.