Luminex® Performance Assay Human IL-2 Kit

Catalog Number: LUH202
Pack Size: 100 Tests

SPECIFICATIONS AND USE

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

Microparticle Region
- Region-17

Components
- Microparticle Concentrate (Part 891058) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 892619) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.

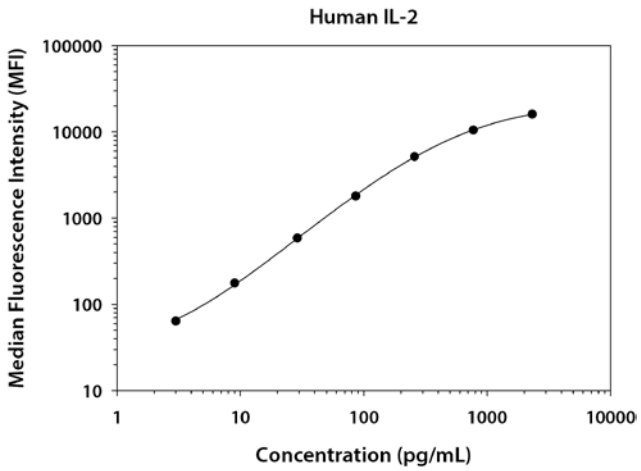
Other Supplies Required
- Luminex Performance Assay Human Base Kit A (Catalog Number LUH000).

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-2 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	75 87	81	——
1	2320	15,942 16,306	16,124	16,043
2	773	10,557 10,583	10,570	10,489
3	258	5151 5368	5260	5179
4	86	1788 1984	1886	1805
5	29	660 675	668	587
6	9	257 260	258	177
7	3	140 150	145	64

PERFORMANCE CHARACTERISTICS

All data were collected with assays run as a multiplex.

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

Thirty-six assays were evaluated, and the MDD of human IL-2 ranged from 0.31-2.23 pg/mL. The mean MDD was 0.89 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)	10	23	203	28	265	543
Standard Deviation	0.52	1.19	6.39	3.7	34	52.5
% CV	5.2	5.2	3.1	13.2	12.8	9.7

Recovery and Linearity - Samples containing and/or spiked with high concentrations of IL-2 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	94	89-98	1:2	Average % of Expected	101	103	104	100
				Range (%)	89-116	99-106	97-109	88-118
Serum	109	98-119	1:4	Average % of Expected	102	99	100	93
				Range (%)	86-124	88-109	91-104	80-114
EDTA plasma	100	88-111	1:8	Average % of Expected	102	95	96	90
				Range (%)	84-121	80-112	89-102	81-105
Heparin plasma	103	90-123						

Specificity - This assay recognizes natural and recombinant human IL-2. 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-6	GM-CSF	GM-CSF	ENA-78	IL-8
CNTF	IL-2 Rα	IL-18	GM-CSF	IL-10	IFN-γ	IL-1α	FGF basic	IL-10
β-ECGF	IL-2 Rβ	LIF	IFN-γ	IL-17	IL-1α	IL-1β	G-CSF	IL-17
FGF acidic	IL-2 Rγ	LIF R	IL-1α	MIP-1α	IL-1β	IL-2	GM-CSF	MCP-1
FGF-4	IL-3 Rα	MIP-1δ	IL-1β	MIP-1β	IL-2	IL-4	IFN-γ	MIP-1α
FGF-5	IL-4 R	MIP-3α	IL-1ra	RANTES	IL-4	IL-6	IL-1α	MIP-1β
FGF-6	IL-5 Rα	MIP-3β	IL-2	TNF-α	IL-6	IL-8	IL-1β	RANTES
FGF-9	IL-6 R	MCP-2	IL-4	Tpo	IL-10	IL-10	IL-1ra	TNF-α
FGF-10	IL-10 R	MCP-3	IL-5	VEGF	TNF-α		IL-4	Tpo
FGF-18	IL-3	MCP-4					IL-5	VEGF
GCP-2	IL-7	M-CSF					IL-6	
GROα	IL-9	TNF RI						
GROβ	IL-11	TNF-β						
GROγ	IL-12/IL-23 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 vacuum manifold device made to accommodate a microplate is necessary for washing. Adjust the vacuum to between 15 and 40 cm Hg.
- 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.