

Magnetic Luminex[®] Performance Assay Human IL-8/CXCL8 Kit

Catalog Number: LUHM208 Pack Size: 100 Tests

Recommended Sample Types	 Cell culture supernates, serum, EDTA plasma, and heparin plasma 			
Microparticle Region	• Region-28			
Components	 Microparticle Concentrate (Part 894437) is supplied as a 100X concentrated stock (0.075 mL) with preservatives. 			
	• Biotin-Antibody Concentrate (Part 892623) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.			
Other Supplies Required	 Magnetic Luminex[®] Performance Assay Human Base Kit A (R&D Systems[®], Catalog # LUHM000). 			
Storage	 Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label. Avoid freezing microparticles. 			
Instructions for Use	 Protect microparticles from light. Refer to the Base Kit insert for the Luminex[®] Performance Assay procedure. 			

TYPICAL DATA

This human IL-8 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.



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.

Forty assays were evaluated, and the MDD of human IL-8 ranged from 0.11-1.97 pg/mL. The mean MDD was 0.39 pg/mL.

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PRECISION

Intra-assay Precision (precision within an assay) - Three samples of known concentration were tested twenty times on one plate to assess intra-assay precision.

Inter-assay Precision (precision between assays) - Three samples of known concentration were tested in twenty-five separate assays to assess inter-assay precision.

	Intra-Assay Precision			Inter-Assay Precision		
Sample	1	2	3	1	2	3
n	20	20	20	20	20	20
Mean (pg/mL)	23	70	461	72	512	852
Standard deviation	1.8	4.0	21.2	8.4	96	99
CV (%)	7.8	5.7	4.6	11.6	18.7	11.6

RECOVERY

Samples containing and/or spiked with human IL-8 were evaluated for recovery.

Sample Type	Average % Recovery	Range
Cell culture supernates	100	96-103%
Serum	112	91-129%
EDTA plasma	105	81-138%
Heparin plasma	95	79-110%

LINEARITY

Samples containing and/or spiked with human IL-8 were serially diluted to evaluate assay linearity.

		Cell culture supernates	Serum	EDTA plasma	Heparin plasma
1:2	Average % of Expected	92	97	87	104
	Range (%)	79-103	86-105	68-97	93-113
1:4	Average % of Expected	91	102	89	103
	Range (%)	74-116	94-110	74-101	86-110
1:8	Average % of Expected	90	107	90	102
	Range (%)	56-125	96-119	72-99	91-117

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-8.

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.