R&D SYSTEMS
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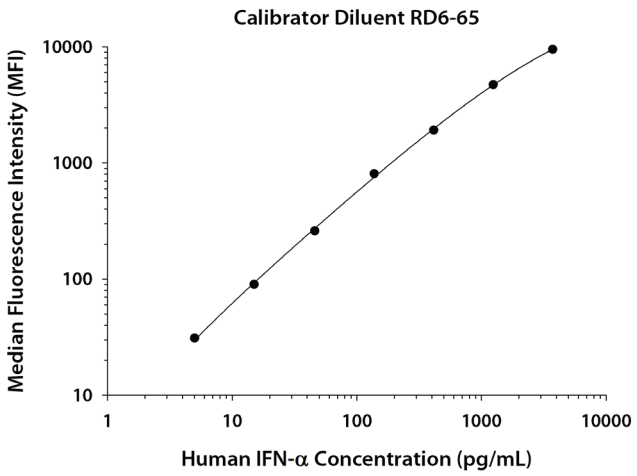
XL Magnetic Luminex® Performance Assay Human IFN-α Kit

Catalog Number: LUXLM9345
Pack Size: 100 Tests

Recommended Sample Types	• Cell culture supernates, serum, EDTA plasma, and heparin plasma
Microparticle Region	• Region-39
Components	• Human IFN-α Magnetic Microparticles (Part 898842) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
Other Supplies Required	• Magnetic Luminex® Performance Assay Human XL Discovery Base Kit (R&D Systems®, Catalog # LUXLM000).
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 Magnetic Luminex® Performance Assay procedure.

TYPICAL DATA

This human IFN-α 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	16 17	16	—
1	3730	9528 9552	9540	9524
2	1243	4738 4744	4741	4725
3	414	1908 1959	1934	1918
4	138	806 842	824	808
5	46	275 277	276	260
6	15	105 106	106	90
7	5	47 47	47	31

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.

Six assays were evaluated, and the MDD of human IFN-α ranged from 0.198-0.721 pg/mL. The mean MDD was 0.291 pg/mL.

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Bio-Techne is a trading name for R&D Systems

PRECISION

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

Inter-assay Precision (precision between assays) - Two 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**	**1**	**2**
n	20	20	25	25
Mean (pg/mL)	21.7	736	20.5	754
Standard deviation	0.759	17.0	2.97	91.2
CV (%)	3.5	2.3	14.5	12.1

RECOVERY

Samples containing and/or spiked with human IFN-α were evaluated for recovery.

Sample Type	Average % Recovery	Range
Cell culture supernates	112	101-124%
Serum	101	49-145%
EDTA plasma	108	59-137%
Heparin plasma	110	61-144%

LINEARITY

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

		Cell culture supernates	Serum	EDTA plasma	Heparin plasma
1:2	Average % of Expected	99	103	95	101
	Range (%)	95-103	99-109	93-97	94-108
1:4	Average % of Expected	100	96	97	116
	Range (%)	98-102	90-100	91-101	101-135
1:8	Average % of Expected	103	94	95	119
	Range (%)	99-105	89-99	88-101	99-148

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 IFN-α.

Recombinant human IFN-α/β R2 interferes at concentrations > 7.41 ng/mL.

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.

Magnetic 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.