R&D SYSTEMS
a bio-techne brand

Magnetic Luminex® Performance Assay Human FGF basic Kit

Catalog Number: LUHM233

Pack Size: 100 Tests

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

Microparticle Region
- Region-13

Components
- Microparticle Concentrate (Part 894441) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 892628) 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).
  or
  Magnetic Luminex® High Performance Assay Human Angiogenesis (R&D Systems®, Catalog # LANM000).

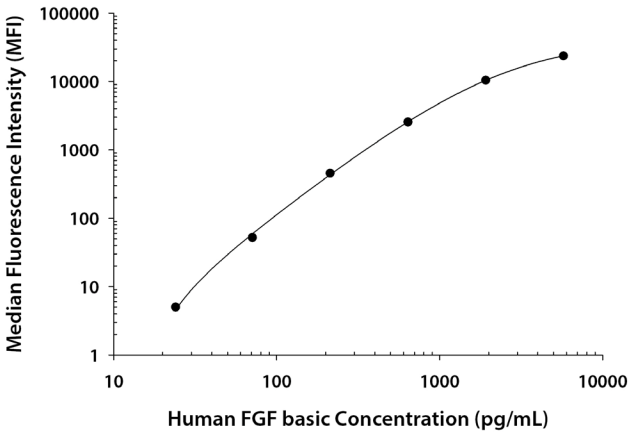
Storage
- Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
- **Avoid freezing microparticles.**
- **Protect microparticles from light.**

Instructions for Use
- Refer to the Base Kit insert for the Luminex® Performance Assay procedure.

TYPICAL DATA

This human FGF basic 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.

Note: *This kit, when used with Human Base Kit A, utilizes a six point standard curve. When fitting a standard curve constructed with the recommended 3-fold dilution series, use the first six points for the FGF basic kit (omit the lowest concentration standard). This kit, when used with the Human Angiogenesis Base Kit A, utilizes a five point standard curve. When fitting a standard curve constructed with the recommended 4-fold dilution series, use the first five points for the FGF basic kit (omit the two lowest concentration standards).*



Standard	(pg/mL)	MFI	Average	Corrected
Blank	0	21 22	22	—
1	5750	23,600 23,730	23,665	23,643
2	1917	10,404 10,411	10,408	10,386
3	639	2525 2610	2568	2546
4	213	470 481	476	454
5	71	72 74	73	51
6	24	26 27	26	4

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 FGF basic ranged from 0.53-4.91 pg/mL. The mean MDD was 1.82 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 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)	29	100	1071	114	991	1415
Standard deviation	1.6	3.4	42	13	150	164
CV (%)	5.5	3.4	3.9	11.6	15.1	11.6

RECOVERY

Samples containing and/or spiked with human FGF basic were evaluated for recovery.

Sample Type	Average % Recovery	Range
Cell culture supernates	99	72-114%
Serum	95	84-110%
EDTA plasma	97	86-106%

LINEARITY

Samples containing and/or spiked with human FGF basic were serially diluted to evaluate assay linearity.

		Cell culture supernates	Serum	EDTA plasma
1:2	Average % of Expected	96	96	112
	Range (%)	86-107	92-104	98-122
1:4	Average % of Expected	96	92	114
	Range (%)	73-112	86-101	99-126
1:8	Average % of Expected	101	89	114
	Range (%)	74-122	84-97	92-127

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 FGF basic.

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.