



# Magnetic Luminex® Performance Assay Human FGF acidic Kit

**Catalog Number:** LANM232

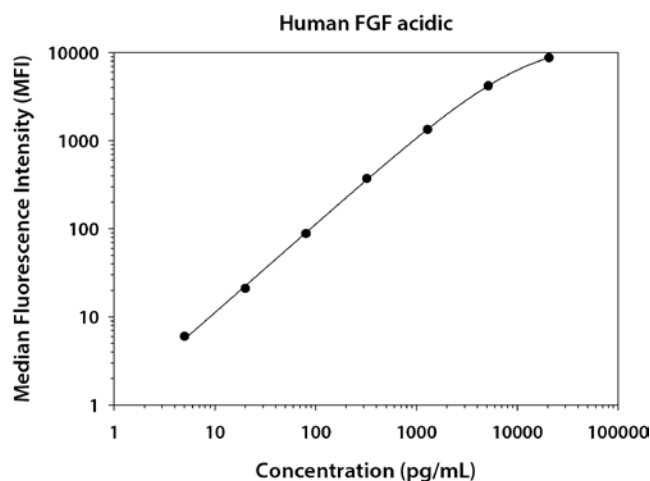
**Pack Size:** 100 Tests

## SPECIFICATIONS AND USE

- Recommended Sample Types**
- Cell culture supernates, serum, EDTA plasma, heparin plasma, urine, and human milk.
- Microparticle Region**
- Region-15
- Components**
- Microparticle Concentrate (Part 894455) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
  - Biotin-Antibody Concentrate (Part 893624) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.
- Other Supplies Required**
- Magnetic Luminex Performance Assay Human Angiogenesis Base Kit A (Catalog Number 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 Magnetic Luminex Performance Assay procedure.

## TYPICAL DATA

This human FGF acidic 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	15 16	16	—
1	20,600	8726 8835	8781	8765
2	5150	4217 4221	4219	4203
3	1288	1326 1385	1356	1340
4	322	371 401	386	370
5	80	102 105	104	88
6	20	37 37	37	21
7	5	21 21	21	5

## 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 FGF acidic ranged from 1.2-6.7 pg/mL. The mean MDD was 2.6 pg/mL.

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.

**R&D Systems, Inc.**

**1-800-343-7475**

**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 fifty-two separate assays to assess precision between assays.

	Intra-assay Precision				Inter-assay Precision		
Sample	1	2	3		1	2	3
n	20	20	20		52	52	52
Mean (pg/mL)	45.8	165	3732		49.4	192	3478
Standard Deviation	2.7	5.2	157		7.7	24.6	404
% CV	5.9	3.1	4.2		15.6	12.8	11.6

**Recovery and Linearity** – Samples spiked with high concentrations of FGF acidic were evaluated for recovery. Samples were serially diluted to evaluate assay linearity.

Recovery			Linearity								
Sample Type	Average % Recovery	Range %			Cell culture supernates	Serum	EDTA plasma	Heparin plasma	Platelet-poor		Urine
									EDTA plasma	Heparin plasma	
Cell culture supernates	110	95-128	1:2	Average % of Expected	93	89	91	93	93	92	97
Serum	117	97-136		Range (%)	85-102	85-95	84-95	78-125	88-100	87-96	82-118
EDTA plasma	108	90-124	1:4	Average % of Expected	84	87	87	90	88	86	92
Heparin plasma	113	66-156		Range (%)	81-87	70-97	75-101	74-112	84-95	83-88	77-108
PP EDTA plasma	105	93-118	1:8	Average % of Expected	80	89	88	83	84	87	80
PP Heparin plasma	100	80-116		Range (%)	73-87	77-101	75-99	69-111	81-85	83-89	59-91
Urine	112	89-116									

**Specificity** - This assay recognizes natural and recombinant human FGF acidic. The assay was tested for cross-reactivity and interference with the following factors. Less than 0.5% cross-reactivity and interference was observed unless otherwise noted.

Recombinant human:	Recombinant mouse:	Recombinant rat:	Recombinant porcine:	Recombinant human multiplex partners:
Angiopoietin-2	EG-VEGF	EGF	GM-CSF	Angiogenin
Angiopoietin-4	EGF	FGF basic		Angiopoietin-1
Angiopoietin-like 3	EGF R	FGF-BP		Endostatin
Angiopoietin-like 4	FGF-8b	IGF-II		FGF basic
CTGF	FGF-8c	IGFBP-1		PDGF-AA
EG-VEGF	FGF-15	KGf/FGF-7		PDGF-BB
FGF-3	FGF-21	M-CSF		PlGF
FGF-4	FGF-23	PDGF-CC		Thrombospondin-2
FGF-5	FGF R3	PlGF-2		VEGF
FGF-6	Flt-3	Thrombospondin-1		VEGF-D
FGF-8a	Flt-3 Ligand	VEGF-B <sub>167</sub>		
FGF-8e	G-CSF	VEGF R2		
FGF-8f	G-CSF R	VEGF R3		
FGF-9	GM-CSF			
FGF-10	HB-EGF			
FGF-11	HRG-α			
FGF-12	IGF-I			
FGF-13	IGF-I R			
FGF-16	IGF-II			

Recombinant mouse FGF acidic cross-reacts approximately 49% in this assay.  
Recombinant bovine FGF acidic cross-reacts approximately 4.6% in this assay.

## 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 multianalyte 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.

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