



Magnetic Luminex® Performance Assay Human PDGF-AA Kit

Catalog Number: LANM221

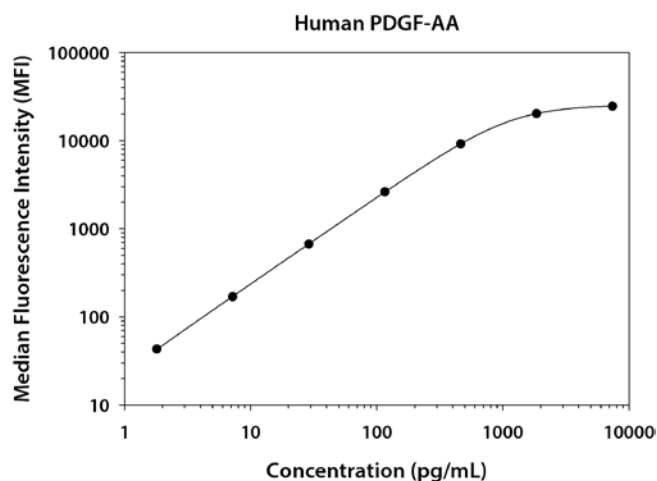
Pack Size: 100 Tests

SPECIFICATIONS AND USE

- Recommended Sample Types**
- Cell culture supernates, serum, EDTA plasma, heparin plasma, urine, and human milk.
- Microparticle Region**
- Region-18
- Components**
- Microparticle Concentrate (Part 894457) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
 - Biotin-Antibody Concentrate (Part 893621) 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 PDGF-AA 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	43 43	43	—
1	7400	24,611 24,768	24,690	24,647
2	1850	20,354 20,426	20,390	20,347
3	463	9189 9275	9232	9189
4	116	2644 2683	2664	2621
5	29	709 721	715	672
6	7.2	212 212	212	169
7	1.8	85 87	86	43

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 PDGF-AA ranged from 0.2-1.0 pg/mL. The mean MDD was 0.4 pg/mL.

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)	7.15	30.5	674		8.8	36.2	675
Standard Deviation	0.3	1.0	31		1.5	5.2	86
% CV	3.9	3.1	4.6		16.5	14.4	12.7

Recovery and Linearity – Samples spiked with high concentrations of PDGF-AA 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	Human milk
									EDTA plasma	Heparin plasma		
Cell culture supernates	114	59-142	1:2	Average % of Expected	98	108	101	108	105	108	107	101
Serum	120	69-145		Range (%)	89-107	97-115	90-116	101-120	100-107	99-118	93-122	93-113
EDTA plasma	92	71-112	1:4	Average % of Expected	95	111	101	109	110	109	102	111
Heparin plasma	95	75-125		Range (%)	81-114	97-130	80-125	90-132	109-112	100-117	89-129	86-144
PP EDTA plasma	89	63-99	1:8	Average % of Expected	95	117	99	106	114	113	93	104
PP Heparin plasma	87	67-112		Range (%)	86-115	107-134	76-123	92-118	110-117	109-119	80-115	90-118
Urine	100	73-112										

Specificity - This assay recognizes natural and recombinant human PDGF-AA. 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 acidic
CTGF	FGF-8c	PDGF-BB		FGF basic
EG-VEGF	FGF-15	VEGF ₁₆₄		PDGF-BB
FGF-3	FGF-21			PlGF
FGF-4	FGF-23			Thrombospondin-2
FGF-5	FGF R3			VEGF
FGF-6	FGF R4			VEGF-D
FGF-8a	Flt-3	Thrombospondin-1		
FGF-8e	Flt-3 Ligand	VEGF-B ₁₆₇		
FGF-8f	G-CSF	VEGF R2		
FGF-9	G-CSF R	VEGF R3		
FGF-10	GM-CSF			
FGF-11	HB-EGF			
FGF-12	HRG- α			
FGF-13	IGF-I			
FGF-16	IGF-I R			
	IGF-II			

Recombinant rat PDGF-AA cross-reacts approximately 12.9% in this assay.
Recombinant rat PDGF-AB cross-reacts approximately 1.0% in this assay.
Recombinant mouse PDGF R α interferes at concentrations > 1562 pg/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.

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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