



Magnetic Luminex® Performance Assay Human Angiogenin Kit

Catalog Number: LANM265

Pack Size: 100 Tests

SPECIFICATIONS AND USE

Recommended Sample Types

Microparticle Region

Components

Other Supplies Required

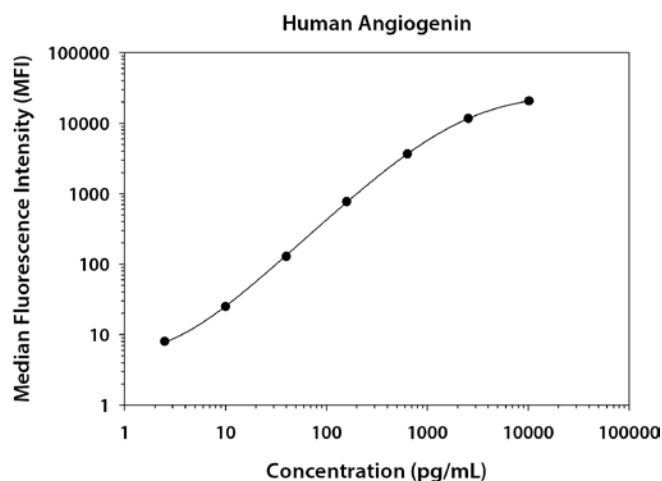
Storage

Instructions for Use

- Cell culture supernates, serum, EDTA plasma, heparin plasma, urine, and human milk.
- Region-12
- Microparticle Concentrate (Part 894452) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 893617) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.
- Magnetic Luminex Performance Assay Human Angiogenesis Base Kit A (Catalog Number LANM000).
- 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.**
- Refer to the Base Kit insert for the Magnetic Luminex Performance Assay procedure.

TYPICAL DATA

This human Angiogenin 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	25 25	25	—
1	10,200	20,678 20,811	20,745	20,720
2	2550	11,619 11,713	11,666	11,641
3	638	3665 3709	3687	3662
4	159	781 806	794	769
5	40	151 154	153	128
6	10	50 50	50	25
7	2.5	33 33	33	8

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 Angiogenin ranged from 0.5-2.7 pg/mL. The mean MDD was 1.4 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 forty-eight separate assays to assess precision between assays.

Sample	Intra-assay Precision				Inter-assay Precision		
	1	2	3		1	2	3
n	20	20	20		48	48	48
Mean (pg/mL)	16.4	62	1392		23.2	89.1	1450
Standard Deviation	1.2	1.8	85.4		3.0	10.9	114
% CV	7.1	2.9	6.1		12.8	12.2	7.9

Recovery and Linearity – Samples spiked with high concentrations of Angiogenin 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	Urine	Human milk
Cell culture supernates	109	77-134	1:2	Average % of Expected	95	90	90	96	94	102
				Range (%)	82-103	84-104	79-95	79-108	77-107	87-118
Urine	99	86-109	1:4	Average % of Expected	90	86	86	93	87	102
				Range (%)	78-98	81-96	74-96	81-106	69-100	87-125
			1:8	Average % of Expected	86	89	89	96	79	101
				Range (%)	74-98	83-99	77-101	77-112	64-94	89-112

Specificity - This assay recognizes natural and recombinant human Angiogenin. The assay was tested for cross-reactivity and interference with the following factors. Less than 0.5% cross-reactivity and interference was observed.

Recombinant human:			Recombinant mouse:		Recombinant rat:	Recombinant porcine:	Recombinant human multiplex partners:
Angiopoietin-2	FGF-17	IGF-II R	EG-VEGF	HGF	EGF	GM-CSF	Angiopoietin-1
Angiopoietin-4	FGF-18	IGFBP-1	EGF	HGF R	FGF basic		Endostatin
Angiopoietin-like 3	FGF-19	IGFBP-2	EGF R	IGF-I	FGF-BP		FGF acidic
Angiopoietin-like 4	FGF-20	KGF/FGF-7	FGF-8b	IGF-II	β-NGF		FGF basic
CTGF	FGF-21	MSP	FGF-8c	IGFBP-1	PDGF-BB		PDGF-AA
EG-VEGF	FGF-22	MSP-β	FGF-15	KGF/FGF-7	VEGF ₁₆₄		PDGF-BB
FGF-3	FGF R1α	M-CSF	FGF-21	M-CSF			PIGF
FGF-4	FGF R3	β-NGF	FGF-23	PDGF-CC			Thrombospondin-2
FGF-5	FGF R4	PD-ECGF	FGF R3	PIGF-2			VEGF
FGF-6	Flt-3	PDGF-CC	Flt-3	Thrombospondin-1			VEGF-D
FGF-8a	Flt-3 Ligand	PDGF-DD	Flt-3 Ligand	VEGF-B ₁₆₇			
FGF-8e	G-CSF	VEGF-C	G-CSF	VEGF R2			
FGF-8f	G-CSF R	VEGF R1	GM-CSF	VEGF R3			
FGF-9	GM-CSF	VEGF R2					
FGF-10	HB-EGF	VEGF R3					
FGF-11	HRG-α	Thrombospondin-1					
FGF-12	IGF-I	Thrombospondin-4					
FGF-13	IGF-I R						
FGF-16	IGF-II						

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.