



Magnetic Luminex® Performance Assay Human MMP-8 Kit

Catalog Number: LMPM908

Pack Size: 100 Tests

SPECIFICATIONS AND USE

MMP Forms Measured

- This kit measures pro-, mature, and TIMP-1 complexed MMP-8.

Recommended Sample Types

- Cell culture supernates, serum, heparin plasma, platelet-poor heparin plasma, saliva, and urine.
Note: When assaying serum and plasma samples, MMP-8 cannot be multiplexed with EMMPRIN (R&D Systems Catalog # LMPM972).

Microparticle Region

- Region-25

Components

- Microparticle Concentrate (Part 894468) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 894335) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.

Other Supplies Required

- Magnetic Luminex Performance Assay Human MMP Base Kit (Catalog Number LMPM000).

Storage

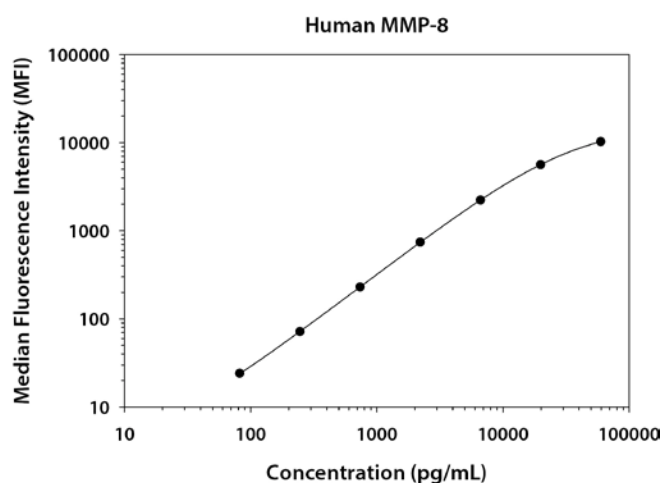
- Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
- **Avoid freezing microparticles.**
- **Protect microparticles from light.**

Instructions for Use

- Refer to the Base Kit insert for the Magnetic Luminex Performance Assay procedure.

TYPICAL DATA

This human MMP-8 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	38 42	40	—
1	59,700	9807 10,852	10,330	10,290
2	19,900	5640 5736	5688	5648
3	6633	2267 2275	2271	2231
4	2211	770 793	782	742
5	737	267 273	270	230
6	246	110 113	112	72
7	81.9	64 64	64	24

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 MMP-8 ranged from 2.8-16.6 pg/mL. The mean MDD was 7.8 pg/mL.

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

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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 separate assays to assess precision between assays.

	Intra-assay Precision				Inter-assay Precision		
Sample	1	2	3		1	2	3
n	20	20	20		59	59	59
Mean (pg/mL)	558	5177	23,073		565	4888	20,584
Standard Deviation	39.2	271	1410		81.0	481	1977
% CV	7.0	5.2	6.1		14.3	9.8	9.6

Recovery and Linearity – Samples containing and/or spiked with high concentrations of MMP-8 were evaluated for recovery and were serially diluted to evaluate assay linearity.

Recovery				Linearity							
Sample Type	Average % Recovery	Range (%)				Cell culture supernates	Serum	Heparin plasma	Platelet-poor heparin plasma	Saliva	Urine
Cell culture supernates	109	72-134		1:2	Average % of Expected	104	112	113	111	107	104
					Range (%)	95-112	107-118	105-119	100-128	92-117	90-117
Serum	85	72-95		1:4	Average % of Expected	94	110	114	103	96	91
					Range (%)	85-102	103-127	104-123	91-113	83-104	75-98
Heparin plasma	86	67-97		1:8	Average % of Expected	83	109	107	96	99	85
					Range (%)	74-93	99-127	98-123	84-113	85-109	71-93
Platelet-poor heparin plasma	85	64-111									
Urine	110	88-131									

Specificity - This assay recognizes natural and recombinant human pro-, and mature, and TIMP-1 complexed MMP-8. The assay was tested for cross-reactivity and interference with the following factors. Less than 0.5% cross-reactivity and interference was observed with the following.

Recombinant human:			Recombinant mouse:		Recombinant rat:	Recombinant human multiplex partners:
ADAM8	ADAMTSL1.2	Lipocalin-2/NGAL	ADAM9	MMP-3	MMP-8	EMMPRIN
ADAM9	CD44	MMP-14/MT1-MMP	ADAM10	MMP-7		MMP-1
ADAM10	Hyaluronan	MMP-16/MT3-MMP	ADAM15	MMP-8		MMP-2
ADAM12	Integrin $\alpha 3 \beta 1$	TACE/ADAM17	ADAM19	MMP-9		MMP-3
ADAM15	Integrin $\alpha 5$	TIMP-1	EMMPRIN	MMP-12		MMP-7
ADAM19	Integrin αL	TIMP-2	Lipocalin-2/NGAL	TIMP-1		MMP-9
ADAM33	Integrin $\alpha M \beta 2$	TIMP-3	MMP-2	TIMP-2		MMP-10
ADAMTS1	Integrin $\alpha V \beta 6$	TIMP-4				MMP-12
ADAMTS4	Integrin $\alpha V \beta 8$	VEGF				MMP-13
ADAMTS5	Lipocalin-1					
ADAMTS13						

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. 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.