



Magnetic Luminex® Performance Assay Human MMP-10 Kit

Catalog Number: LMPM910

Pack Size: 100 Tests

SPECIFICATIONS AND USE

MMP Forms Measured

- This kit measures pro-, mature, and TIMP-1 complexed MMP-10.

Recommended Sample Types

- Cell culture supernates, serum, heparin plasma, platelet-poor heparin plasma, saliva, and urine.
Note: When assaying serum and plasma samples, MMP-10 cannot be multiplexed with EMMPRIN (R&D Systems Catalog # LMPM972).

Microparticle Region

- Region-27

Components

- Microparticle Concentrate (Part 894469) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 894336) 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

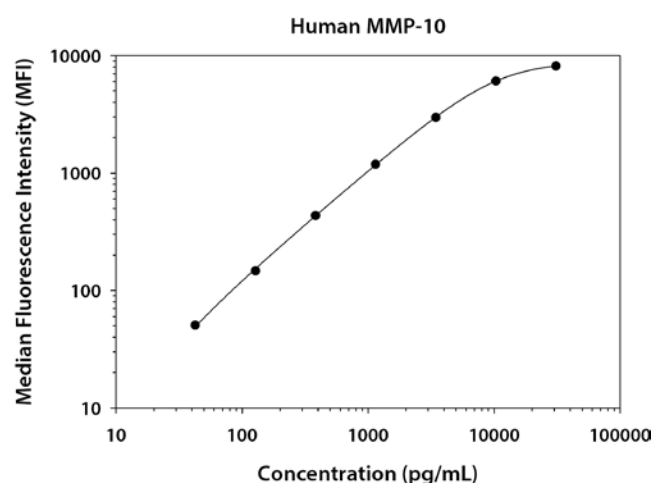
- Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
- **Avoid freezing microparticles.**
- **Protect microparticles from light.**

Instructions for Use

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

TYPICAL DATA

This human MMP-10 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	19 19	19	—
1	31,000	7666 8690	8178	8159
2	10,333	6039 6159	6099	6080
3	3444	2943 3055	2999	2980
4	1148	1190 1223	1207	1188
5	383	452 454	453	434
6	127.6	165 165	165	146
7	42.5	69 69	69	50

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-three assays were evaluated, and the MDD of human MMP-10 ranged from 0.01-3.2 pg/mL. The mean MDD was 1.7 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		72	72	72
Mean (pg/mL)	289	1765	6709		273	1701	7012
Standard Deviation	16.0	104	453		37.6	151	689
% CV	5.5	5.9	6.8		13.7	8.9	9.8

Recovery and Linearity – Samples containing and/or spiked with high concentrations of MMP-10 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	Urine
Cell culture supernates	100	91-111	1:2	Average % of Expected	113	95	110	104
				Range (%)	102-125	86-105	106-119	94-122
Serum	105	82-137	1:4	Average % of Expected	111	86	107	109
				Range (%)	95-120	75-97	102-117	93-112
Heparin plasma	102	87-116	1:8	Average % of Expected	113	91	112	106
				Range (%)	100-125	83-100	105-120	95-122
Platelet-poor heparin plasma	103	94-114						
Urine	84	73-94						

Specificity - This assay recognizes natural and recombinant human pro-, and mature, and TIMP-1 complexed MMP-10. 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-8
ADAM33	Integrin $\alpha M\beta 2$	TIMP-3	MMP-2	TIMP-2		MMP-9
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.