



Magnetic Luminex® Performance Assay Human MMP-2 Kit

Catalog Number: LMPM902

Pack Size: 100 Tests

SPECIFICATIONS AND USE

MMP Forms Measured

- This kit measures pro-, and mature MMP-2.

Recommended Sample Types

- Serum, heparin plasma, platelet-poor heparin plasma, saliva, and urine.

Note: Cell culture supernates are not suitable for use in this assay.

Microparticle Region

- Region-19

Components

- Microparticle Concentrate (Part 894466) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 894165) 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

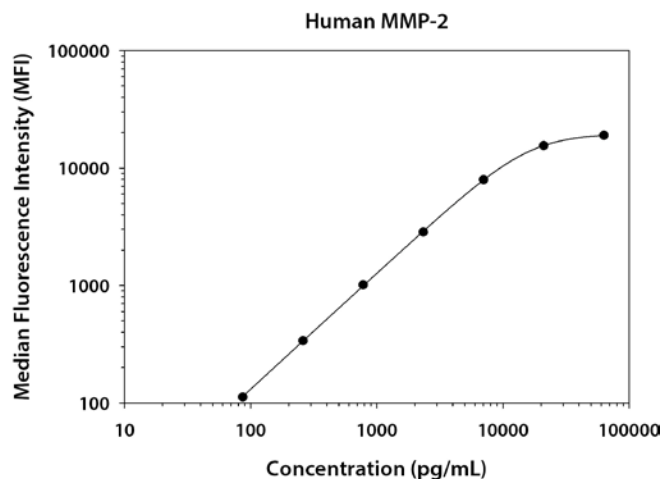
- Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
- **Avoid freezing microparticles.**
- **Protect microparticles from light.**

Instructions for Use

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

TYPICAL DATA

This human MMP-2 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	22 22	22	—
1	63,100	17,214 20,792	19,003	18,981
2	21,033	15,309 15,775	15,542	15,520
3	7011	7762 8189	7976	7954
4	2337	2818 2931	2875	2853
5	779	1031 1040	1035	1013
6	260	356 363	360	338
7	86.6	134 135	134	112

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-2 ranged from 2.2-12.6 pg/mL. The mean MDD was 3.8 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 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)	264	2095	8411		223	1870	7701
Standard Deviation	24.5	150	618		30.0	187	893
% CV	9.3	7.2	7.3		13.3	10.0	11.6

Recovery and Linearity – Samples containing and/or spiked with high concentrations of MMP-2 were evaluated for recovery and were serially diluted to evaluate assay linearity.

Recovery			Linearity				
Sample Type	Average % Recovery	Range (%)		Serum	Heparin plasma	Platelet-poor heparin plasma	Urine
Serum	106	79-129	1:2	Average % of Expected	103	94	91
				Range (%)	97-106	90-97	84-107
Heparin plasma	93	67-114	1:4	Average % of Expected	105	89	79
				Range (%)	94-114	82-98	71-85
Urine	111	97-125	1:8	Average % of Expected	100	89	73
				Range (%)	85-114	85-98	64-84

Specificity - This assay recognizes natural and recombinant human pro-, and mature MMP-2. 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-3
ADAM12	Integrin $\alpha 3 \beta 1$	TACE/ADAM17	ADAM19	MMP-9		MMP-7
ADAM15	Integrin $\alpha 5$	TIMP-1	EMMPRIN	MMP-12		MMP-8
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.