



# Magnetic Luminex® Performance Assay Human EMMPRIN/CD147 Kit

**Catalog Number:** LMPM972

**Pack Size:** 100 Tests

## SPECIFICATIONS AND USE

### Recommended Sample Types

- Cell culture supernates, serum, heparin plasma, platelet-poor heparin plasma, saliva, and urine.

**Note:** When assaying serum and plasma samples, EMMPRIN cannot be multiplexed with MMP-7, MMP-8, MMP-10, MMP-12, or MMP-13 (R&D Systems Catalog Numbers LMPM907, LMPM908, LMPM910, LMPM919, and LMPM511, respectively).

### Microparticle Region

- Region-30

### Components

- Microparticle Concentrate (Part 894472) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 894338) 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

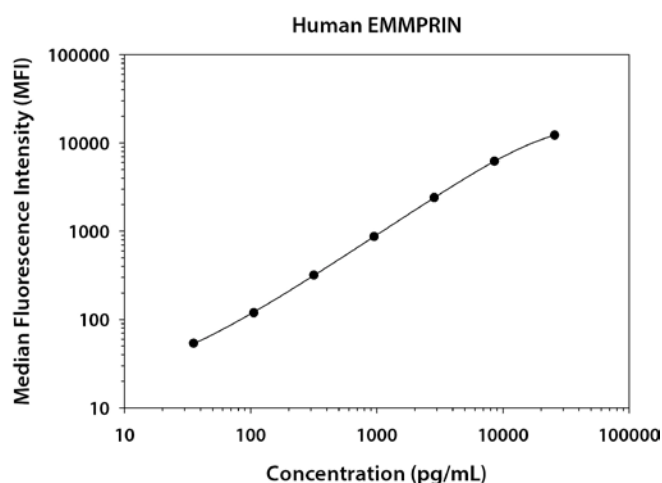
- Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
- Avoid freezing microparticles.**
- Protect microparticles from light.**

### Instructions for Use

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

## TYPICAL DATA

This human EMMPRIN 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	18 19	19	—
1	25,700	11,420 13,160	12,290	12,271
2	8567	6110 6339	6225	6206
3	2856	2382 2467	2425	2406
4	952	879 897	887	868
5	317	336 338	337	318
6	106	137 137	137	118
7	35.3	72 72	72	53

## 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 EMMPRIN ranged from 1.3-5.6 pg/mL. The mean MDD was 2.3 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		72	72	72
Mean (pg/mL)	265	1785	7075		256	1782	7284
Standard Deviation	19.6	109	424		29.2	152	696
% CV	7.4	6.1	6.0		11.4	8.5	9.5

**Recovery and Linearity** - Samples containing and/or spiked with high concentrations of EMMPRIN 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	96	72-123	1:2	Average % of Expected	114	86	99	93
				Range (%)	103-122	79-91	98-99	89-93
			1:4	Average % of Expected	114	82	95	91
				Range (%)	98-123	80-86	90-101	85-97
			1:8	Average % of Expected	111	78	99	87
				Range (%)	97-121	75-81	96-107	77-90

**Specificity** - This assay recognizes natural and recombinant human EMMPRIN. 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	ADAM9	MMP-3	MMP-1
ADAM9	ADAM10	MMP-7	MMP-2
ADAM10	ADAM15	MMP-8	MMP-3
ADAM12	ADAM19	MMP-9	MMP-7
ADAM15	EMMPRIN	MMP-12	MMP-8
ADAM19	Lipocalin-2/NGAL	TIMP-1	MMP-9
ADAM33	MMP-2	TIMP-2	MMP-10
ADAMTS1			MMP-12
ADAMTS4			MMP-13
ADAMTS5			
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.