

Human MMP-8 ELISA Instructions

Cat:EH0103

Content

	CAT	Volume
1 CP (Coated Plate)	EH0103CP	96 well
2 S (Standard)	EH0103S,S1-S7,S0	9 vial
3 SD (Sample Diluent)	ESD01	15 ml/bottle
4 DA (Detect Antibody)	EH0103DA	6 ml/bottle
5 SH (Streptavidin-HRP)	ESH01	12 ml/bottle
6 AB (Assay Buffer 1×)	EAB01	12 ml/bottle
7 TS (TMB Substrate)	ETS01	12 ml/bottle
8 SS (Stop Solution)	ESS01	12 ml/bottle
9 WB (Wash Buffer 10×)	EWB01	50 ml/bottle
10 SF (Sealer Film)	ESF01	6 pieces

NOTE: After the kit is opened, the stabilization period of each content is 30 days, so please use the kit within 30 days after opening.

Sample Dilution

Samples such as serum, plasma require at least a 40-fold dilution into Sample Diluent. A suggested 40-fold dilution is 5 µl of sample + 195 µl of Sample Diluent.

REAGENT PREPARATION

Washing Buffer (1×) Preparation

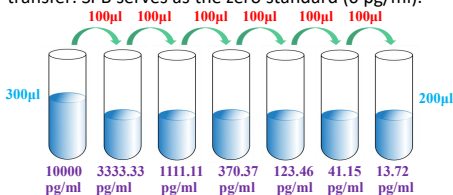
Pour entire contents (50 ml) of the Washing Buffer Concentrate (10×) into a clean 500 ml graduated cylinder. Bring to final volume of 500 ml with glass-distilled or deionized water. Transfer to a clean wash bottle and store at 2 to 25 °C.

Standard Curve Preparation:

S1 to S7 and S0 is ready to use for serum and plasma.

Other sample type, prepare the standard curve with whatever buffer (SPB, Sample Prepared Buffer) is used to prepare the sample, such as cell culture supernatant, tissue grinding liquid, cell lysate, etc. Urine sample use AB (Assay Buffer) prepare standard curve.

The human MMP-8 Standard EH0103S 100000 pg/ml 30 µl + 270 µl SPB serves as the high standard (10000 pg/ml). Pipette 200 µl of SPB into each tube. Use the high standard to produce a 1:2 dilution series. Mix each tube thoroughly before the next transfer. SPB serves as the zero standard (0 pg/ml).



ASSAY PROCEDURE

Bring all reagents and samples to room temperature before use.

1 Prepare all reagents and working standards as directed in the previous sections.

2 Remove excess CP (Coated Plate) strips from the plate frame, return them to the foil pouch and reseal.

3 Add 50 µl of AB (Assay Buffer) to each well.

4 Add 50 µl or 10 µl of Standard or sample per well. Ensure reagent addition is uninterrupted and completed within 15 minutes.

5 Add 50 µl of DA (Detect Antibody) to each well.

6 Cover with an SF (Sealer Film). Incubate at room temperature (18 to 25 °C) for 1 hour on a microplate shaker set at 500 rpm.

7 Aspirate each well and wash, repeating the process four times. Wash by filling each well with WB (Washing Buffer 300 µl). Complete removal of liquid at each step is essential to good performance. After the last wash, remove any remaining WB (Washing Buffer) by aspirating or decanting. Invert the plate and blot it against clean paper towels.

8 Add 100 µl of SH (Streptavidin-HRP) to each well.

9 Cover with a new SF (Sealer Film). Incubate at room temperature (18 to 25 °C) for 30 min on a microplate shaker set at 500 rpm.

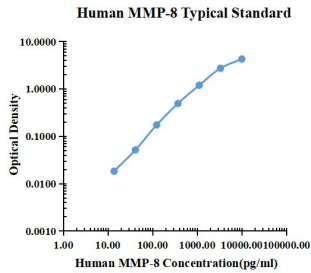
10 Repeat aspiration/wash as in step 7.

11 Add 100 µl of TS (TMB Substrate) to each well. Incubate for 5-30 minutes at room temperature.

12 Add 100 µl of SS (Stop Solution) to each well.

13 Determine the optical density within 30 minutes, using microplate reader set to 450 nm corrected with 570 nm or 630 nm.

TYPICAL DATA



pg/ml	O.D.	Average	Corrected
0.00	0.0162	0.0172	0.0167
13.72	0.0324	0.0377	0.0351
41.15	0.0650	0.0718	0.0684
123.46	0.1828	0.1977	0.1936
370.37	0.4943	0.5266	0.5105
1111.11	1.1880	1.2360	1.2120
3333.33	2.5860	2.9120	2.7323
10000.00	4.2764	4.3073	4.2919

SENSITIVITY

The minimum detectable dose (MDD) of human MMP-8 is typically less than 1.59 pg/ml (50 μ l of sample volume) or 9.04 pg/ml (10 μ l of sample volume).

The MDD was determined by adding two standard deviations to the mean optical density value of ten zero standard replicates and calculating the corresponding concentration.

PRECISION

Intra-assay Precision (Precision within an assay) Three samples of known concentration were tested twenty times on one plate to assess intra-assay precision.

Inter-assay Precision (Precision between assays)

Sample Number	Intra-assay Precision			Inter-assay Precision		
	S1	S2	S3	S1	S2	S3
22	22	22	22	6	6	6
Average (pg/ml)	195.0	1021.4	3035.2	184.8	986.8	2963.6
Standard Deviation	11	41.3	92.6	7.4	18.4	97.6
Coefficient Of Variation (%)	5.7	4.0	3.0	4.0	1.9	3.3

RECOVERY

The spike recovery was evaluated by spiking 3 levels of human MMP-8 into health human serum sample. The un-spiked serum was used as blank in this experiment.

The recovery ranged from 84% to 100% with an overall mean recovery of 91%.

LINEARITY

To assess the linearity of the assay, five samples were spiked with high concentration of MMP-8 in human serum and diluted with Sample Diluent to produce samples with values within the dynamic range of the assay.

The linearity ranged from 88% to 96% with an overall mean recovery of 92%.

SAMPLE VALUES

Serum/Plasma – Thirty samples from apparently healthy volunteers were evaluated for the presence of human MMP-8 in this assay. No medical histories were available for the donors.

Sample Matrix	Sample Evaluated	Range (ng/ml)	Detectable %	Mean of Detectable (ng/ml)
Serum	30	4.84-76.92	100	23.05

n.d. = non-detectable. Samples measured below the sensitivity are considered to be non-detectable.