



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Mouse, Rat
Applications:	ELISA(Cap)
Clone number:	PSH23-34

Description: Metalloproteinase with a rather broad substrate specificity that can degrade fibronectin, laminin, gelatins of type I, III, IV, and V; collagens III, IV, X, and IX, and cartilage proteoglycans. Activates different molecules including growth factors, plasminogen or other matrix metalloproteinases such as MMP9. Once released into the extracellular matrix (ECM), the inactive pro-enzyme is activated by the plasmin cascade signaling pathway. For example, in dopaminergic neurons, gets activated by the serine protease HTRA2 upon stress and plays a pivotal role in DA neuronal degeneration by mediating microglial activation and alpha-synuclein/SNCA cleavage. In addition, plays a role in immune response and possesses antiviral activity against various viruses such as vesicular stomatitis virus, influenza A virus (H1N1) and human herpes virus 1. Mechanistically, translocates from the cytoplasm into the cell nucleus upon virus infection to influence NF-kappa-B activities.

Immunogen: Recombinant protein within Mouse MMP-3 aa 18-477 (HA211280).

Positive control: Recombinant Mouse MMP-3 protein (HA211280).

Subcellular location: Secreted, extracellular space, extracellular matrix.

Database links: SwissProt: P28862 Mouse | P03957 Rat

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH23-35] to Mouse/Rat MMP-3 (Detecor) (HA724366) and Recombinant Mouse MMP-3 protein (HA211280) as the standard. The reference range value is 19.5-5,000 pg/mL.

Storage Buffer: 1*PBS (pH7.4).

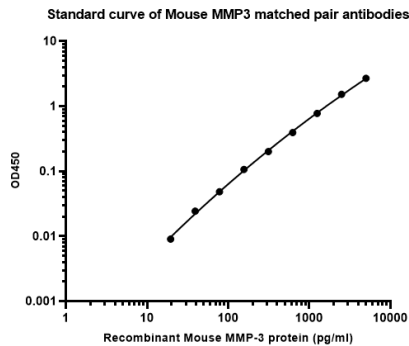
Storage Instruction: Store at 2-8°C. Avoid freeze.

Purity: Protein A affinity purified.

Images

Fig1: Sandwich ELISA analysis of Mouse MMP-3 matched pair antibodies

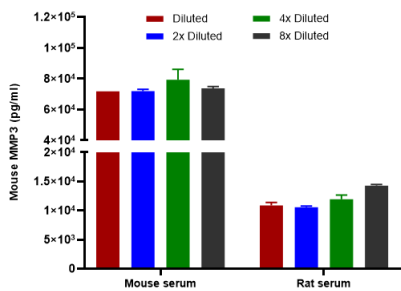
Capture: HA724365, Mouse/Rat MMP-3 Rabbit mAb [PSH23-34]
Detector: HA724366, Mouse/Rat MMP-3 Rabbit mAb [PSH23-35]



Elisa assay was performed by coating wells of a 96-well plate with 100 μ l per well of capture antibody (HA724365) diluted in carbonate/bicarbonate buffer, at a concentration of 2 μ g/mL overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150 μ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Mouse MMP-3 protein (HA211280) starting from 5,000 pg/ml to 0 pg/ml and detect antibody (HA724366, Biotin, 0.2 μ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100 μ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

Fig2: Interpolated concentrations of native MMP3 in Mouse and Rat serum.

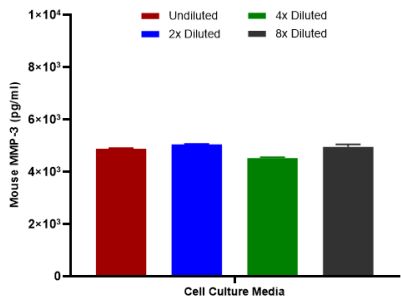
Capture: HA724365, Mouse/Rat MMP-3 Rabbit mAb [PSH23-34]
Detector: HA724366, Mouse/Rat MMP-3 Rabbit mAb [PSH23-35]



Interpolated concentration of native MMP3 was measured in duplicate at different sample concentrations and interpolated from the MMP3 standard curves. The interpolated dilution factor corrected values were plotted (mean $\pm$ SD, n=2). The mean MMP3 concentration was determined to be 74,092 pg/ml in Mouse serum and 11,892 pg/ml in Rat serum.

Fig3: Interpolated concentrations of spiked MMP3 in cell culture media samples.

Capture: HA724365, Mouse/Rat MMP-3 Rabbit mAb [PSH23-34]
Detector: HA724366, Mouse/Rat MMP-3 Rabbit mAb [PSH23-35]



The concentrations of MMP3 were measured in duplicates, interpolated from the MMP3 standard curves and corrected for sample dilution. diluted samples are as follows: 50% cell culture media with FBS. The interpolated dilution factor corrected values are plotted (mean $\pm$ SD, n=2).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Seehawer M et al. Loss of Kmt2c or Kmt2d drives brain metastasis via KDM6A-dependent upregulation of MMP3. Nat Cell Biol. 2024 Jul
2. Jiang J et al. MMP3 at the crossroads: Linking molecular pathways to disease diagnosis and therapy. Pharmacol Res. 2025 Jun

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation