

Anti-Human MMP-3 Antibody [PSH07-62] - BSA and Azide free (Detector)

HA722878



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Clone number:	PSH07-62

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 Human MMP-3 aa18-477 (HA210853).

Positive control: Recombinant Human MMP-3 protein (HA210853).

Subcellular location: Secreted

Database links: SwissProt: P08254 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH07-61] to Human MMP-3 antibody (Capture) (HA722877) and recombinant Human MMP-3 protein as the standard (HA210853). The reference range value is 41.2-10,000 pg/ml.

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

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Technical:0086-571-89986345

Service mail:support@huabio.cn

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Images

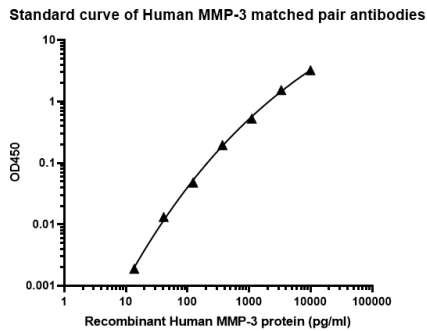


Fig1: Sandwich ELISA analysis of human MMP3 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 μ l per well of capture antibody (HA722877) diluted in carbonate/bicarbonate buffer, at a concentration of 2 μ g/mL overnight at 4°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 Human MMP-3 protein (HA210853) starting from 10,000 pg/ml to 0 pg/ml and detect antibody (HA722878, Biotin, 0.2 μ g/ml) for 1 hour at 30°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°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.

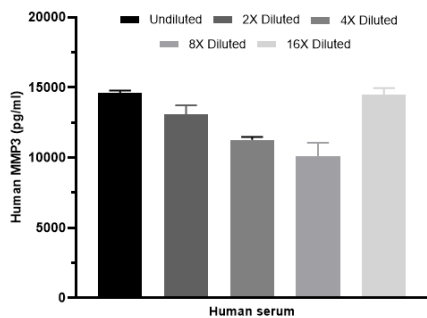


Fig2: Interpolated concentrations of native MMP3 in human serum samples.

The concentrations of MMP3 were interpolated from the MMP3 standard curves and corrected for sample dilution. Undiluted samples are human serum 20%. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean MMP3 concentration was determined to be 12,706 pg/ml in human serum.

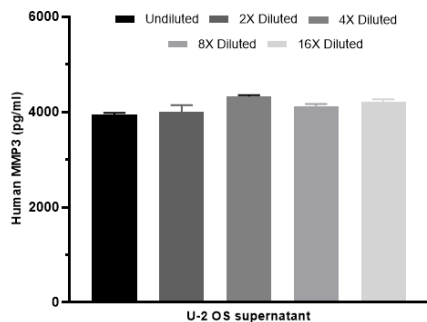


Fig3: Interpolated concentrations of native MMP3 in U-2 OS cell culture supernatant.

The concentrations of MMP3 were interpolated from the MMP3 standard curves and corrected for sample dilution. Undiluted samples are U-2 OS cell culture supernatant 100%. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean MMP3 concentration was determined to be 4,120 pg/ml in U-2 OS cell culture supernatant.

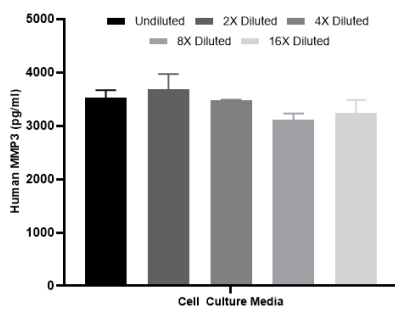


Fig4: Interpolated concentrations of spiked MMP3 in human cell culture media samples.

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

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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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