

Biotin Conjugated Anti-Human MMP-12 Antibody [PSH22-93] - Detector

HA725324B



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det), ELISA
Clone number:	PSH22-93

Description: The matrix metalloproteinases (MMP) are a family of peptidase enzymes responsible for the degradation of extracellular matrix components, including collagen, gelatin, fibronectin, laminin and proteoglycan. Transcription of MMP genes is differentially activated by phorbol ester, lipopolysaccharide (LPS) or staphylococcal enterotoxin B (SEB). MMP catalysis requires both calcium and zinc. MMP-12 (also designated macrophage metalloelastase) is produced in alveolar macrophages and degrades elastin. MMP-12 may contribute to elastin degradation occurring in granulomatous skin diseases and may also participate in macrophage migration through the epidermal and vascular basement membranes in inflammatory disorders.

Conjugate: Biotin-conjugated

Immunogen: Recombinant protein within Human MMP-12 aa 280-470 (HA210856).

Positive control: Recombinant Human MMP-12 protein (HA210856).

Subcellular location: Secreted, extracellular space, extracellular matrix.

Database links: SwissProt: P39900 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH22-92] to Human MMP-12 (Capture) (HA725323) and Recombinant Human MMP-12 protein (HA210856) as the standard. The reference range value is 3.9-1,000 pg/mL.
ELISA Use at an assay dependent concentration.

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.05% Proclean 300.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

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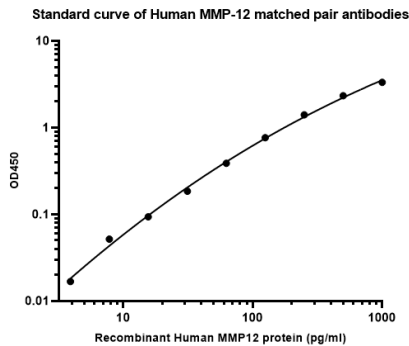
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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

Fig1: Sandwich ELISA analysis of Human MMP-12 matched pair antibodies

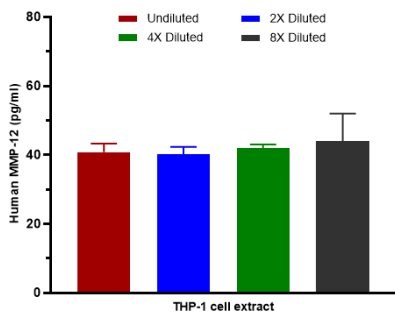
Capture: HA725323, Human MMP-12 Rabbit mAb [PSH22-92]
Detector: HA725324, Human MMP-12 Rabbit mAb [PSH22-93]



Elisa assay was performed by coating wells of a 96-well plate with 50 μ l per well of capture antibody (HA725323) 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 human MMP-12 protein (HA210856) starting from 1,000 pg/ml to 0 pg/ml and detect antibody (HA725324, Biotin, 0.2 μ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 50 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 MMP-12 in THP-1 cell extract:

Capture: HA725323, Human MMP-12 Rabbit mAb [PSH22-92]
Detector: HA725324, Human MMP-12 Rabbit mAb [PSH22-93]



The concentrations of MMP-12 were measured in duplicates, interpolated from the MMP-12 standard curve and corrected for sample dilution. Undiluted samples are THP-1 cell extract 1 mg/mL. The interpolated dilution factor corrected values are plotted (mean $\pm$ SD, n=2). The mean MMP-12 concentration was determined to be 41.7 pg/ml in THP-1 cell extract.

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

Background References

1. Zhou X et al. Macrophage-derived MMP12 promotes fibrosis through sustained damage to endothelial cells. J Hazard Mater. 2024 Jan
2. Yi C et al. Macrophage elastase (MMP12) critically contributes to the development of subretinal fibrosis. J Neuroinflammation. 2022 Apr