

## Anti-Human MMP-7 Antibody [PSH07-94] - BSA and Azide free (Detector)

# HA722927



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	ELISA(Det)
<b>Clone number:</b>	PSH07-94

**Description:** This gene encodes a member of the peptidase M10 family of matrix metalloproteinases (MMPs). Proteins in this family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. The encoded preproprotein is proteolytically processed to generate the mature protease. This secreted protease breaks down proteoglycans, fibronectin, elastin and casein and differs from most MMP family members in that it lacks a conserved C-terminal hemopexin domain. The enzyme is involved in wound healing, and studies in mice suggest that it regulates the activity of defensins in intestinal mucosa. The gene is part of a cluster of MMP genes on chromosome 11. This gene exhibits elevated expression levels in multiple human cancers.

**Immunogen:** Recombinant protein within Human MMP-7 aa 18-267 (HA210989).

**Positive control:** Recombinant Human MMP-7 protein (HA210989)

**Subcellular location:** Secreted

**Database links:** SwissProt: P09237 Human

**Recommended Dilutions:**

**ELISA(Det)** Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH07-93] to Human MMP-7 antibody (Capture) (HA722926) and recombinant Human MMP-7 protein (HA210989) as the standard. The reference range value is 32.9-8,000 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.

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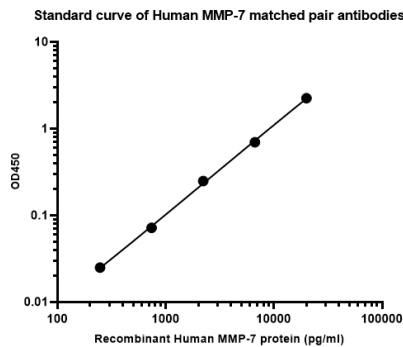
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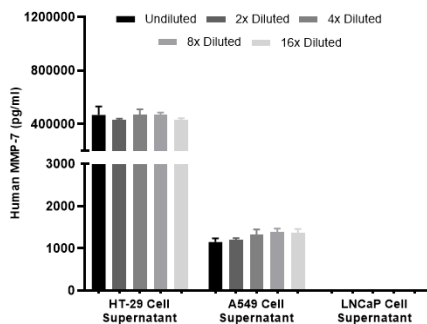
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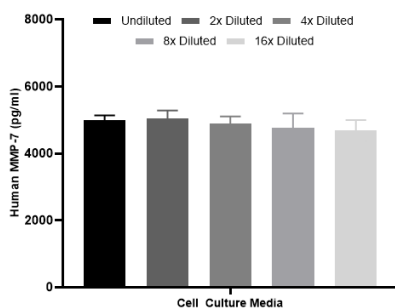
**Fig1:** Sandwich ELISA analysis of Human MMP-7 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100  $\mu$ l per well of capture antibody (HA722926) diluted in carbonate/bicarbonate buffer, at a concentration of 2  $\mu$ g/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150  $\mu$ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human MMP-7 protein (HA210989) starting from 20000 pg/ml to 0 pg/ml and detect antibody (HA722927, Biotin, 0.2  $\mu$ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100  $\mu$ 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 total MMP7 in human cell culture supernatant samples.

Interpolated concentration of native total MMP-7 was measured in duplicate at different sample concentrations and interpolated from the total MMP-7 standard curves. Undiluted samples were 100% cell supernatant. The interpolated dilution factor corrected values were plotted (mean  $\pm$  SD, n=2). The mean total MMP-7 concentration was determined to be 454,056 pg/mL in HT-29 and 1287 pg/ml in A549 in cell culture supernatant, undetectable in LNCaP supernatant.



**Fig3:** Interpolated concentrations of spiked Pro-MMP-7 in cell culture media samples.

The concentrations of Pro-MMP-7 were measured in duplicates, interpolated from the Pro-MMP-7 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".

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### Background References

1. Quantin B., Murphy G., Breathnach R. Pump-1 cDNA codes for a protein with characteristics similar to those of classical collagenase family members. *Biochemistry* 28:5327-5334 (1989)

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