

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human MMP-7 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse MMP-7 is observed, and less than 1% cross-reactivity with recombinant human (rh) MMP-8 and rhMMP-12 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MMP-7 Leu18-Lys267 Accession # P09237
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS		
Please Note: Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human MMP-7 (Catalog # 907-MP), see our available Western blot detection antibodies
Simple Western	10 µg/mL	See Below
Neutralization	Measured by its ability to neutralize Recombinant Human MMP-7 (0.2 µg/mL, Catalog # 907-MP) cleavage of the fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH ₂ (10 µM, Catalog # ES001). The Neutralization Dose (ND ₅₀) is typically 2 µg/mL.	

DATA

Western Blot

Detection of Human MMP-7 by Western Blot. Western blot shows lysates of Capan-1 human pancreatic adenocarcinoma cell line and HT-29 human colon adenocarcinoma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human MMP-7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF907) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for MMP-7 at approximately 28 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry

MMP-7 in Human Pancreas. MMP-7 was detected in immersion fixed paraffin-embedded sections of human pancreas array using Goat Anti-Human MMP-7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF907) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Simple Western

Detection of Human MMP-7 by Simple Western™. Simple Western lane view shows lysates of normal stem cells (negative control) and Crohn's stem cells, loaded at 0.2 mg/mL. A specific band was detected for MMP-7 at approximately 10 kDa (as indicated) using 10 µg/mL of Goat Anti-Human MMP-7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF907) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

Neutralization

Neutralization of MMP-7 Activity by Human MMP-7 Antibody. The cleavage of Mca-PLGL-Dpa-AR-NH₂ (10 µM, Catalog # ES001) by Recombinant Human MMP-7 (0.2 µg/mL, Catalog # 907-MP) is measured after preincubation with increasing concentrations of Goat Anti-Human MMP-7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF907). The ND₅₀ is typically 2 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 12 months from date of receipt, -20 to -70 °C as supplied.● 1 month, 2 to 8 °C under sterile conditions after reconstitution.● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Matrix metalloproteinases (MMPs) are a family of zinc and calcium dependent endopeptidases with the combined ability to degrade all the components of the extracellular matrix. MMP-7 (matrilysin) is expressed in epithelial cells of normal and diseased tissues, and is capable of digesting a large series of proteins of the extracellular matrix including collagen IV and X, gelatin, casein, laminin, aggrecan, entactin, elastin and versican. MMP-7 is implicated in the activation of other proteinases such as plasminogen, MMP-1, MMP-2, and MMP-9. In addition to its roles in connective tissue remodeling and cancer, MMP-7 also regulates intestinal α -defensin activation in innate host defense, releases tumor necrosis factor- α in a model of herniated disc resorption, and cleaves FasL to generate a soluble form in a model of prostate involution. Structurally, MMP-7 is the smallest of the MMPs and consists of two domains: a pro-domain that is cleaved upon activation and a catalytic domain containing the zinc-binding site.