

MMP1 Polyclonal Antibody

Catalog NumberPA1-29550

Product data sheet

Details		Species Reactivity	
Size	50 µg	Species reactivity	Human
Host/Isotope	Rabbit / IgG	<div><div>Tested Applications</div><div>Dilution *</div></div>	
Class	Polyclonal		
Type	Antibody		
Immunogen	Synthetic peptide corresponding to N-terminus of MMP1 (Human).		
Conjugate	Unconjugated		
Form	Liquid	ELISA (ELISA)	0.1-1 µg/mL
Concentration	0.2 mg/mL	Immunoprecipitation (IP)	3-5 µg x 10^6 cells
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.	Western Blot (WB)	0.5-2 µg/mL
		Immunocytochemistry (ICC/IF)	5 µg/mL

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product specific information

Recommended positive controls: PMA induced A431 whole cell lysate. Store product as a concentrated solution. Centrifuge briefly prior to opening the vial.

Background/Target Information

Proteins of the matrix metalloproteinase (MMP) 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. Most MMP's are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. This gene encodes a secreted enzyme which breaks down the interstitial collagens, types I, II, and III. The gene is part of a cluster of MMP genes which localize to chromosome 11q22.3. Alternative splicing results in multiple transcript variants.

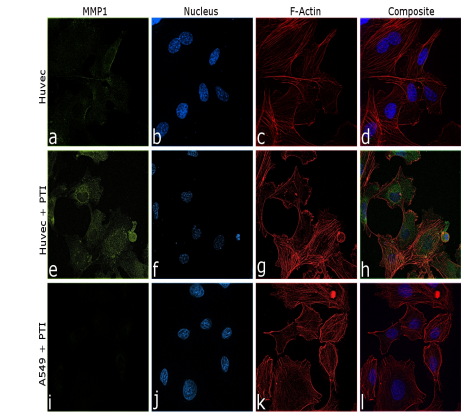
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MMP1 Antibody (PA1-29550)

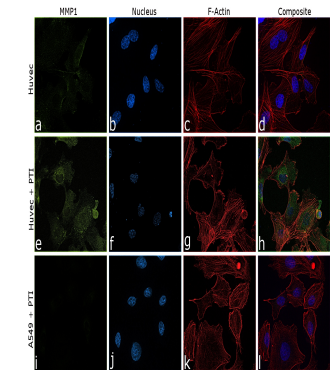


Antibody specificity was demonstrated by detection of differential basal expression of the target across cell models owing to their inherent genetic constitution. Immunofluorescence analysis using Anti-MMP1 Polyclonal Antibody (Product # PA1-29550) shows increased expression of MMP1 in Huvec cells treated with Protein transport inhibitor in comparison to A549 treated with the same. [Relative expression validation info.](#)

Product Images For MMP1 Polyclonal Antibody

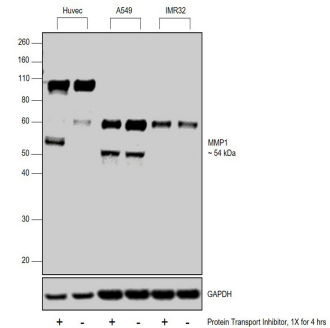
MMP1 Antibody (PA1-29550) in ICC/IF

Immunofluorescence analysis of MMP1 was performed using 70% confluent log phase HUVEC and A549 untreated and Protein Transport Inhibitor (PTI) treated cells. The cells were fixed with 4% Paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 2% BSA for 10 minutes at room temperature. The cells were labeled with MMP1 Polyclonal Antibody (Product # PA1-29550) at 5 µg/mL in 0.1% BSA, incubated at 4 degree celsius overnight and then labeled with Goat anti-Rabbit IgG (H+L), Superclonal™ Recombinant Secondary Antibody, Alexa Fluor 488 (Product # A27034) at 1:2000 dilution for 45 minutes at room temperature (Panel a, e, i: Green). Nuclei (Panel b, f, j: Blue) were stained with SlowFade® Gold Antifade Mountant with DAPI (Product # S36938). F-actin (Panel c, g, k: Red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d, h, l represents the merged image showing increased cytoplasmic localization of MMP1 in Huvec upon PTI treatment in comparison to untreated Huvec and also A549 treated with PTI which is reported as a low expressing model for A549 (Untreated A549 data not shown). The images were captured at 60X magnification.



MMP1 Antibody (PA1-29550) in WB

Western blot was performed using Anti-MMP1 Polyclonal Antibody (Product # PA1-29550) and a 54 kDa band corresponding to MMP1 was observed in Huvec treated with Protein Transport Inhibitor (PTI) and not in treated and untreated A549 and IMR32 along with an uncharacterized band (*) at ~50 kDa, ~60 kDa and ~95 kDa in the cell lines tested. Whole cell extracts (30 µg lysate) of Huvec treated with PTI (1X for 4hrs) (Lane 1), Huvec untreated (Lane 2), A549 treated with PTI (Lane 3), A549 untreated (Lane 4), IMR32 treated with PTI (Lane 5) and IMR32 untreated (Lane 6) were electrophoresed using NuPAGE™ 10% Bis-Tris Protein Gel (Product # NP0302BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (0.5µg/ml) and detected by chemiluminescence with Goat anti-Rabbit IgG (H+L), Superclonal™ Recombinant Secondary Antibody, HRP (Product # A27036, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005). Antibodies raised against internal domains of MMP1 recognize a non-specific band at ~95 kDa [10.1111/j.1432-1033.1996.0239u.x].



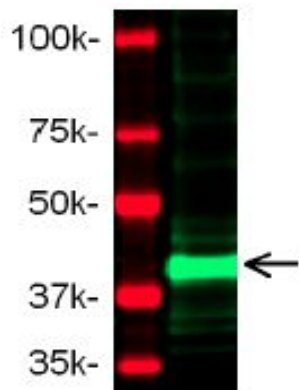
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MMP1 Antibody (PA1-29550) in WB

Western blot analysis of MMP1 in human MMP-1 over-expressing HEK293 cell lysate using a MMP1 polyclonal antibody (Product # PA1-29550).



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