

Antigen Affinity-purified Polyclonal Goat IgG Catalog Number: AF3467

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Species Reactivity	Mouse		
Specificity	Detects mouse MMP-12 in direct ELISAs and Western blots. In direct ELISAs,less than 20% cross-reactivity with recombinant human MMP-12 is observed, and less than 5% cross-reactivity with recombinant mouse (rm) MMP-3, rmMMP-8, and rmMMP-10 is observed.		
Source	Polyclonal Goat IgG		
Purification	Antigen Affinity-purified		
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse MMP-12 Ala18-Cys462 Accession # EDL24933		
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 Iyophilized or as a 0.2 μm filtered solution in PBS.		

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.				
	Recommended Concentration	Sample		
Western Blot	2 μg/mL	See Below		
Immunoprecipitation	25 μg/mL	Conditioned cell culture medium spiked with Recombinant Mouse MMP-12 (Catalog # 3467-MP), see our available Western blot detection antibodies		

DATA



Detection of Mouse MMP-12 by Western Blot. Western blot shows mouse serum and mouse plasma. PVDF membrane was probed with 2 µg/mL of Goat Anti-Mouse MMP-12 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3467) followed by HRPconjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for MMP-12 at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

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. 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-12 (macrophage elastase) is found in macrophages and its expression in monocytes can be induced by cytokines such as GM-CSF and CD40 signaling. In addition to elastin, MMP-12 can degrade a broad spectrum of substrates, including type IV collagen, fibronectin, laminin, vitronectin, proteoglycans, chondroitin sulfate, myelin basic protein, α_1 -antitrypsin, and plasminogen. It can also activate MMP-2 and MMP-3. MMP-12 is required for macrophage-mediated proteolysis and matrix invasion in mice. MMP-12 is proposed to have a direct role in the pathogenesis of aortic aneurysms and in the development of pulmonary emphysema that results from chronic inhalation of cigarette smoke. Structurally, the pro-MMP-12 consists of following domains: a pro domain, a catalytic domain containing the zinc-binding site, and a C-terminal hemopexin-like domain. The recombinant mouse MMP-12 corresponds to the pro form that can be activated.

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