

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MMP-12 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MMP-12 Leu17-Cys470 Accession # P39900
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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 (1). 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 rhMMP-12 corresponds to the pro form that can be activated by autocatalysis under the conditions described above.

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