

PRODUCT INFORMATION



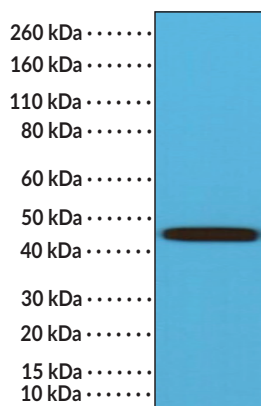
MMP-12 (C-Term) Rabbit Monoclonal Antibody (Clone RM381)

Item No. 32305

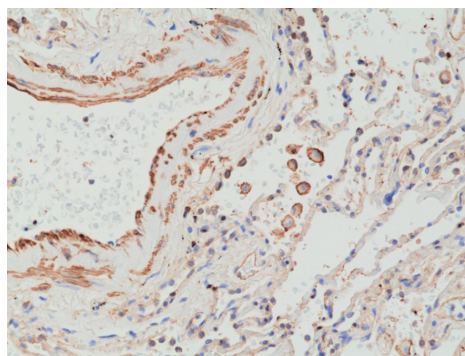
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Macrophage Elastase, Matrix Metalloproteinase-12, MME
Immunogen:	Peptide from the C-terminal region of human MMP-12
Species Reactivity:	(+) Human
Species Reactivity:	(+) MMP-12
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM381
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC is 1:1,000-1:2,500 and 1:200-1:1,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of HEK293 cell lysate using MMP-12 (C-Term) Rabbit Monoclonal Antibody (Clone RM381) at a 1:500 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human lung tissue using MMP-12 (C-Term) Rabbit Monoclonal Antibody (Clone RM381) at a 1:2,500 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Matrix metalloproteinase-12 (MMP-12) is a zinc-dependent metalloproteinase and member of the MMP protein family, which has roles in extracellular matrix (ECM) degradation.¹ It is composed of an N-terminal proenzyme domain, a catalytic domain that contains the zinc-binding motif, and a hemopexin-like C-terminal domain. MMP-12 is a secreted protease expressed by macrophages. It is activated by the loss of the N-terminal proenzyme domain, and this active enzyme is further processed to mature MMP-12 via loss of the C-terminal domain. Levels of MMP-12 are increased in sputum from patients with chronic obstructive pulmonary disease (COPD).³ Plasma levels of MMP-12 are increased and positively associated with atherosclerosis and adverse coronary events in patients with type 2 diabetes mellitus.² Tumor levels of MMP-12 are positively correlated with tumor size and poor overall survival in patients with hepatocellular carcinoma.⁴ Cayman's MMP-12 (C-Term) Rabbit Monoclonal Antibody (Clone RM381) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Nar, H., Werle, K., Bauer, M.M., *et al.* Crystal structure of human macrophage elastase (MMP-12) in complex with a hydroxamic acid inhibitor. *J. Mol. Biol.* **312**(4), 743-751 (2001).
2. Goncalves, I., Bengtsson, E., Colhoun, H.M., *et al.* Elevated plasma levels of MMP-12 are associated with atherosclerotic burden and symptomatic cardiovascular disease in subjects with type 2 diabetes. *Arterioscler. Thromb. Vasc. Biol.* **35**(7), 1723-1731 (2015).
3. Demedts, I.K., Morel-Montero, A., Lebecque, S., *et al.* Elevated MMP-12 protein levels in induced sputum from patients with COPD. *Thorax* **1**(3), 196-201 (2006).
4. He, M.-K., Le, Y., Zhang, Y.-F., *et al.* Matrix metalloproteinase 12 expression is associated with tumor FOXP3⁺ regulatory T cell infiltration and poor prognosis in hepatocellular carcinoma. *Oncol. Lett.* **16**(1), 475-482 (2018).