abcam

ab194314

Alexa Fluor® 488 Anti-MMP9 antibody [EP1255Y]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP1255Y
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	1/500
Notes	-

Predicted

Species	Mouse, Rat, Dog
Dilution info	-
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Rat, Dog
Dilution info	-
Notes	-

Target data

See full target information MMP9

Function	Matrix metalloproteinase that plays an essential role in local proteolysis of the extracellular matrix and in leukocyte migration (PubMed:12879005, PubMed:1480034, PubMed:2551898). Could play a role in bone osteoclastic resorption (By similarity). Cleaves KiSS1 at a Gly-|-Leu bond (PubMed:12879005). Cleaves NINJ1 to generate the Secreted ninjurin-1 form (PubMed:32883094). Cleaves type IV and type V collagen into large C-terminal three quarter fragments and shorter N-terminal one quarter fragments (PubMed:1480034). Degrades fibronectin but not laminin or Pz-peptide.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The MMP-9 protein also known as matrix metalloproteinase-9 or gelatinase B functions as an enzyme involved in the breakdown of extracellular matrix proteins. It consists of a zinc ion at its active site and facilitates the degradation of type IV

	and V collagens fibronectin and elastin. MMP-9 has a molecular weight of approximately 92 kDa and is expressed in a variety of tissues including the liver lungs and immune cells. This enzyme can exist in monomer and dimer forms with its activity regulated by tissue inhibitors of metalloproteinases (TIMPs).
Biological function summary	Matrix metalloproteinase-9 profoundly influences tissue remodeling inflammation and angiogenesis. It does not form part of a larger protein complex but interacts closely with substrates in the extracellular matrix. MMP-9 plays important roles in processes such as embryogenesis reproduction and wound healing through the remodeling of surrounding tissues. The MMP-9 protein is often measured using assays like ELISA or analyzed via techniques such as Western blotting to determine its expression levels and activity in different biological contexts.
Pathways	MMP-9 participates in the matrix metalloproteinase pathway and the NF-kB signaling pathway. These pathways are essential in orchestrating processes such as tissue remodeling and inflammatory responses. MMP-9 acts alongside other matrix metalloproteinases including MMP-2 and is regulated by factors like cytokines growth factors and hormones ensuring the precision of extracellular matrix degradation during physiological processes.
Associated diseases and disorders	Matrix metalloproteinase-9 has associations with cancer invasion and metastasis as well as chronic inflammatory diseases like rheumatoid arthritis. In cancer upregulated MMP-9 expression aids tumor cells in breaching the basement membrane facilitating metastasis. The disorder-associated pathways often involve interactions with proteins like vascular endothelial growth factor (VEGF) and transforming growth factor-beta (TGF-beta). Understanding MMP-9's role in these conditions can contribute to developing targeted therapies that inhibit its activity potentially mitigating disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

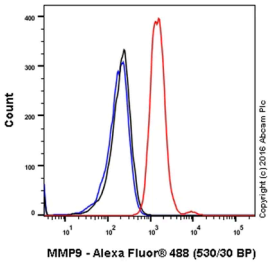
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Flow Cytometry - Alexa Fluor® 488 Anti-MMP9 antibody [EP1255Y] (ab194314)

MMP9 Flow Cytometry staining using rabbit Anti-MMP9 antibody

Overlay histogram showing Jurkat cells stained with ab194314 (red line). The cells were fixed with 4% formaldehyde and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab194314, 1/500 dilution) for 30 min at 22°C.
Isotype control antibody (black line) was Rabbit IgG (monoclonal) Alexa Fluor® 488 (ab199091) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50mW Yellow/Green laser (561nm) and 586/15 bandpass filter.

This antibody gave a positive signal in Jurkat cells fixed with 80% methanol (5 min), permeabilized with 0.1% PBS-Triton X-100 for 15 min used under the same conditions.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.