abcam

ab174298

Anti-ELMO1 antibody [EPR12919]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12919
Purification technique	Affinity purification Protein A
Concentration	0.102 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ELMO1

Function	Involved in cytoskeletal rearrangements required for phagocytosis of apoptotic cells and cell motility. Acts in association with DOCK1 and CRK. Was initially proposed to be required in complex with DOCK1 to activate Rac Rho small GTPases. May enhance the guanine nucleotide exchange factor (GEF) activity of DOCK1.

Storage

Shipped at conditions	Conditional Ambient
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

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.

Supplementary info

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

Activity summary	ELMO1 also known as Engulfment and Cell Motility 1 protein functions in the regulation of cell migration and cytoskeletal reorganization. It possesses a molecular mass of approximately 82 kDa. This protein expresses across many tissues including the brain lung and kidney indicating widespread roles in different cellular processes. Researchers frequently study ELMO1 due to its involvement in essential cellular functions linking to motility and immune responses.
Biological function summary	The protein ELMO1 participates in the regulation of Rac signaling pathways through the formation of complexes with DOCK family proteins. This complex formation contributes to the activation of Rac a small GTPase critical for actin cytoskeleton dynamics. ELMO1 affects processes such as phagocytosis and cell migration by modulating cytoskeletal configurations showing its role in the cellular machinery controlling cell shape and movement.
Pathways	The ELMO1 protein contributes to the Rac1 signaling and the phagocytosis pathway. These pathways play essential roles in integrating extracellular signals to promote cytoskeletal rearrangement and cellular movement. ELMO1 interacts with proteins like DOCK180 to facilitate these pathways. Through these interactions ELMO1 orchestrates cellular responses including actin polymerization and membrane extensions enabling effective cellular reactions to external stimuli.
Associated diseases and disorders	Research links ELMO1 to conditions such as diabetic nephropathy and inflammatory disorders. Elevated levels of ELMO1 expression correlate with increased diabetic nephropathy progression implicating its role in this disease. In inflammatory disorders ELMO1 coordinates with proteins like Rac1 to influence macrophage function and other immune cell behaviors. These interactions show

ELMO1 as an important factor in disease mechanisms where cell migration and immune responses play a significant role.

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

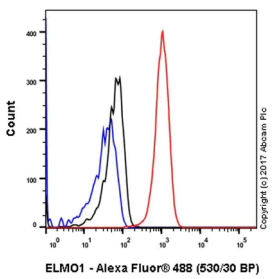
We do not recommend this combination. It is not covered by our product promise.

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.

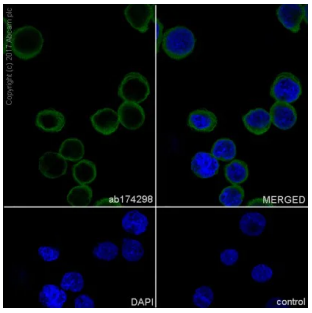
5 product images



Flow Cytometry (Intracellular) - Anti-ELMO1 antibody [EPR12919] (ab174298)

ELMO1 Flow Cytometry (Intracellular) staining using rabbit Anti-ELMO1 antibody

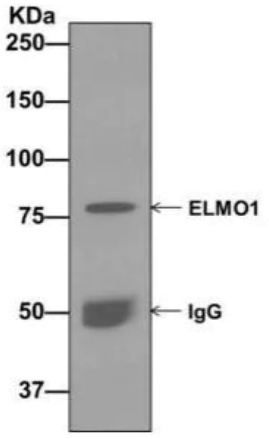
Intracellular Flow Cytometry analysis of Jurkat (human acute T cell leukemia) cells labeling ELMO1 with unpurified ab174298 at 1/200 dilution (1ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) (ab172730) was used as the isotype control, Cell without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-ELMO1 antibody [EPR12919] (ab174298)

ELMO1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ELMO1 antibody

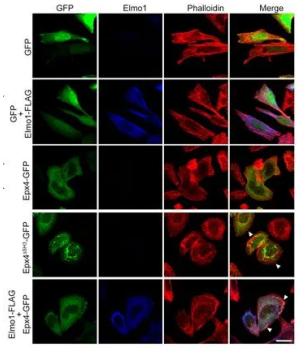
Immunocytochemistry/ Immunofluorescence analysis of K562 labeling ELMO1 with ab174298 at 1/250 dilution. Goat anti rabbit IgG (Alexa Fluor® 488); ab150077 at 1/1000 was used as the secondary antibody. Cells were fixed with 4% Paraformaldehyde and permeabilised with 0.1% tritonX-100. DAPI was used to counter stain nuclei (blue).



Immunoprecipitation - Anti-ELMO1 antibody [EPR12919] (ab174298)

Western blot analysis on immunoprecipitation pellet from Jurkat cell lysate immunoprecipitated using ab174298 at 1/10 dilution.
All lanes:
Immunoprecipitation - Anti-ELMO1 antibody [EPR12919] (ab174298)

Predicted band size: 84 kDa



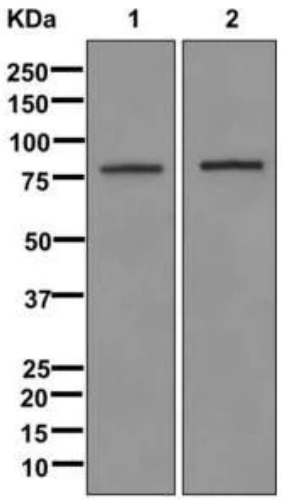
Kim, K. et al Sci Rep. 2017 Jun 30;7(1):4404. doi: 10.1038/s41598-017-04810-6. Reproduced under the Creative Commons license http://creativecommons.org/licenses/by/4.0/.

Immunocytochemistry/ Immunofluorescence - Anti-ELMO1 antibody [EPR12919] (ab174298)

ELMO1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ELMO1 antibody

LR73 cells were transfected with the indicated plasmids and stained with Alexa Fluor 488–conjugated phalloidin and anti-Elmo1 antibody.
One day after transfection, cells were washed with cold PBS, fixed in 4% paraformaldehyde for 15 min, and permeabilized with 0.1% Triton X-100 for 5 min. Next, permeabilized cells were blocked with 1% BSA for 30 min and stained with Alex Fluor 594–conjugated phalloidin and anti-Elmo1 antibody for 1 h at room temperature.

(After Figure 5 of Kim et al).



Western blot - Anti-ELMO1 antibody [EPR12919] (ab174298)

All lanes:
Western blot - Anti-ELMO1 antibody [EPR12919] (ab174298) at 1/10000 dilution

Lane 1:
Human placenta lysate at 10 µg

Lane 2:
Jurkat cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 84 kDa

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