abcam

# ab222227

# Anti-ELMO1 antibody [EPR12919] - BSA and Azide free

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR12919 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1.025 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IP

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Expected

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

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### 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** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |

| | |
|---|---|
| **Storage information** | Do Not Freeze |

## Notes

ab222227 is the carrier-free version of ab174298.

**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.

**Conjugation ready**

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## 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**

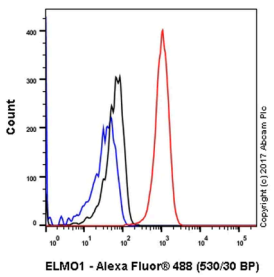
We do not recommend this combination. It is not covered by our product promise.

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.

## 4 product images

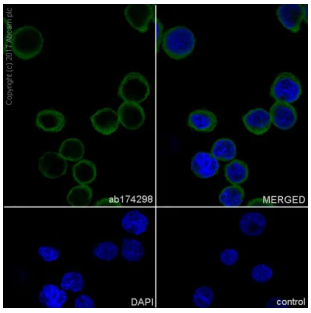



## Flow Cytometry (Intracellular) - Anti-ELMO1 antibody [EPR12919] - BSA and Azide free (ab222227)

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

This Flow Cyt data was generated using the same atni-ELMO1 antibody clone,EPR12919, in a different buffer formulation (cat ab174298).

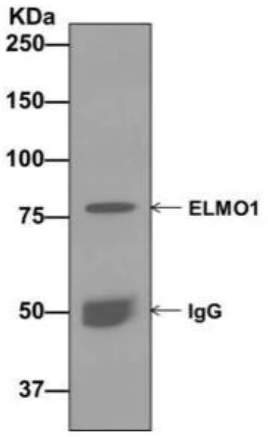
Intracellular Flow Cytometry analysis of Jurkat (human acute T cell leukemia) cells labeling ELMO1 with unpurified ab174298 at 1/200 dilution (1ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) (1/2000 dilution) 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] - BSA and Azide free (ab222227)

ELMO1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ELMO1 antibody

Immunocytochemistry/ Immunofluorescence analysis of K562 labeling ELMO1 with ab222227 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).

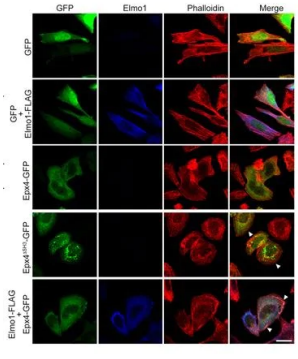



## Immunoprecipitation - Anti-ELMO1 antibody [EPR12919] - BSA and Azide free (ab222227)

This IP data was generated using the same atni-ELMO1 antibody clone, EPR12919, in a different buffer formulation (cat# 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:

## Immunocytochemistry/ Immunofluorescence - Anti-ELMO1 antibody [EPR12919] - BSA and Azide free (ab222227)

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).

10.1038/s41598-017-04810-6. Reproduced under the Creative Commons license http://creativecommons.org/licenses/by/4.0/.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab174298).

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