abcam

ab196186

Alexa Fluor® 647 Anti-EEA1 antibody [EPR4245] - Early Endosome Marker

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
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	EPR4245
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	1/50
Notes	ab199093 - Rabbit monoclonal IgG (Alexa Fluor® 647), is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/167
Notes	This product gave a positive signal in Jurkat cells fixed with 80% methanol (5 min)

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information EEA1

Function	Binds phospholipid vesicles containing phosphatidylinositol 3-phosphate and participates in endosomal trafficking.

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	EEA1 (Early Endosome Antigen 1) is an important protein involved in endosomal trafficking with a molecular weight of approximately 162 kDa. It is a cytoplasmic protein expressed in various cell types acting mainly as an endosome marker. This protein contains a FYVE domain which facilitates binding to phosphatidylinositol 3-phosphate on endosomal membranes. EEA1 also interacts with Rab5 a small GTPase contributing to the fusion of early endosomes.

Biological function summary	EEA1 plays a significant role in early endosomal pathways facilitating endocytic vesicle fusion. EEA1 does not usually work alone; it functions as part of a larger complex involving other endosomal proteins. This protein acts as a tethering molecule which stabilizes the interaction of vesicles with endosomes. By anchoring vesicles EEA1 ensures the correct delivery and sorting of cargo within the cell which is important for cellular homeostasis and signaling.
Pathways	EEA1 contributes to the endocytic pathway and receptor recycling. It ensures proper functioning of the endocytic recycling of receptors such as the epidermal growth factor receptor (EGFR). EEA1-mediated tethering is vital for these pathways and it works closely with proteins like Rab5 which regulate endocytic trafficking. Through these interactions EEA1 affects cellular processes by controlling the flow of signaling receptors and other molecules within the cell.
Associated diseases and disorders	EEA1 dysfunction is linked to neurodegenerative diseases and cancer. Abnormalities in its expression or function can disrupt endosomal trafficking leading to cellular stress and disease. For example in Alzheimer's disease impaired endosomal function involving EEA1 can contribute to amyloid-beta accumulation. In cancer altered EEA1 activity may contribute to aberrant receptor signaling which can promote unchecked cell division. The interplay with proteins like EGFR demonstrates EEA1's importance in maintaining cellular health and response mechanisms.

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

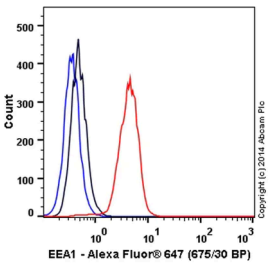
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images



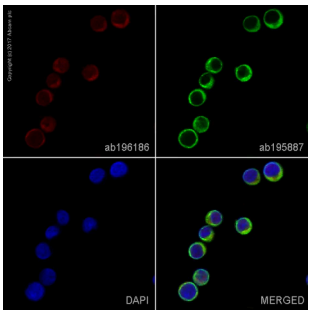
Flow Cytometry - Alexa Fluor® 647 Anti-EEA1 antibody [EPR4245] - Early Endosome Marker (ab196186)

EEA1 Flow Cytometry staining using rabbit Anti-EEA1 antibody

Overlay histogram showing Jurkat cells stained with ab196186 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab196186, 1/50 dilution) for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) Alexa Fluor® 647 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 solid-state 25mW red diode laser (635 nm) and 675/30 bandpass filter.

This antibody gave a positive signal in Jurkat cells fixed with 4% formaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-EEA1 antibody [EPR4245] - Early Endosome Marker (ab196186)

EEA1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-EEA1 antibody

ab196186 staining EEA1 in Jurkat cells. The cells were fixed with 80% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab196186 at 1/167 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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