abcam

ab199426

Anti-TIAM2 antibody [EPR16838]

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	EPR16838
Purification technique	Affinity purification Protein A
Concentration	2.393 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat

Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/450
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

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

Target data

See full target information TIAM2

Function	Modulates the activity of RHO-like proteins and connects extracellular signals to cytoskeletal activities. Acts as a GDP-dissociation stimulator protein that stimulates the GDP-GTP exchange activity of RHO-like GTPases and activates them. Mediates extracellular laminin signals to activate Rac1, contributing to neurite growth. Involved in lamellipodial formation and advancement of the growth cone of embryonic hippocampal neurons. Promotes migration of neurons in the cerebral cortex. When overexpressed, induces membrane ruffling accompanied by the accumulation of actin filaments along the altered plasma membrane (By similarity). Activates specifically RAC1, but not CDC42 and RHOA.

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	TIAM2 also known as T-cell lymphoma invasion and metastasis 2 is a guanine nucleotide exchange factor (GEF) with a mass of approximately 180 kDa. It plays a significant role mechanically by activating the small GTPase Rac1 leading to changes in actin cytoskeleton organization. This protein localizes in the cytoplasm and shows expression in many tissues but finds higher levels in the brain and lymphoid organs. Its role extends to cellular processes like cell migration proliferation and adhesion.
Biological function summary	TIAM2 contributes to intracellular signaling that governs cell shape and movement. It participates as part of a larger signaling complex that includes other GEFs and scaffold proteins. By facilitating the switch of Rac1 from inactive GDP-bound state to active GTP-bound state TIAM2 influences pathways that control the dynamics of the actin cytoskeleton important for cellular structural change highlighting its importance in the development of cellular architecture and motility.
Pathways	TIAM2 activates signaling cascades related to cell migration and differentiation. It plays an essential role in the Rac1-PAK pathway which regulates the actin cytoskeleton dynamics. This pathway interconnects with other signaling molecules like CDC42 and PAK kinases creating a network that controls cellular responses and contacts with the extracellular matrix. In this network TIAM2 acts as a facilitator for cellular adaptation to environmental stimuli.
Associated diseases and disorders	TIAM2 links to conditions such as cancer metastasis and neurological disorders. Alterations in its expression or function contribute to the progression of certain cancers by promoting increased motility and invasive capabilities of tumor cells. Additionally abnormalities in TIAM2 activity have been observed in diseases like schizophrenia where it interacts with proteins such as DISC1 affecting neuronal signaling and stability. Understanding TIAM2's involvement in these diseases provides insight into therapeutic targets for managing 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

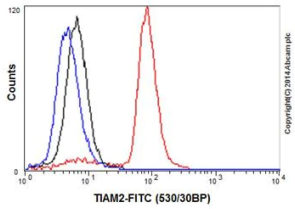
We do not recommend this combination. It is not covered by our product promise.

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.

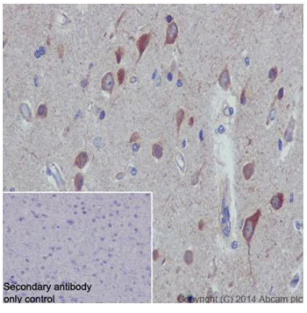
7 product images



Flow Cytometry (Intracellular) - Anti-TIAM2 antibody [EPR16838] (ab199426)

TIAM2 Flow Cytometry (Intracellular) staining using rabbit Anti-TIAM2 antibody

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed K562 (Human chronic myelogenous leukemia cells from bone marrow)cells labeling U TIAM2 with ab199426 at 1/450 dilution (red). The secondary antibody was Goat anti rabbit IgG (FITC) at 1/150 dilution. The isotype control is Rabbit monoclonal IgG (black) and the cell without incubation with primary antibody and secondary antibody is blue.

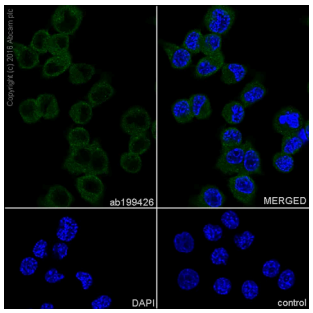


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TIAM2 antibody [EPR16838] (ab199426)

TIAM2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TIAM2 antibody

Immunohistochemical analysis of paraffin-embedded Human gliocytoma tissue labeling TIAM2 with ab199426 at 1/500 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500

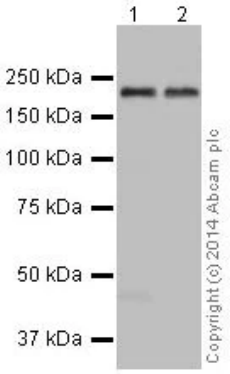
dilution. Cytoplasm staining on Human gliocytoma tissue is observed. Counter stained with Hematoxylin.
Negative control: Used only secondary antibody.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-TIAM2 antibody [EPR16838] (ab199426)

TIAM2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TIAM2 antibody

Immunocytochemistry/Immunofluorescence analysis of Raw264.7 cells labelling TIAM2 with ab199426 at 1/500. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody.
Control: PBS only.
Nuclear counter stain: DAPI.



Western blot - Anti-TIAM2 antibody [EPR16838] (ab199426)

Blocking/dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-TIAM2 antibody [EPR16838] (ab199426) at 1/10000 dilution

Lane 1:
K562 (Human chronic myelogenous leukemia cells from bone marrow) whole cell lysate at 20 µg

Lane 2:
293 (Human embryonic kidney) whole cell lysate at 20 µg

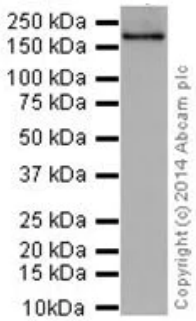
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 190 kDa

Observed band size: 193 kDa

Exposure time: 1min



Western blot - Anti-TIAM2 antibody [EPR16838] (ab199426)

Blocking/dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-TIAM2 antibody [EPR16838] (ab199426) at 2000 Cells

All lanes:
Human fetal brain lysate at 10 µg

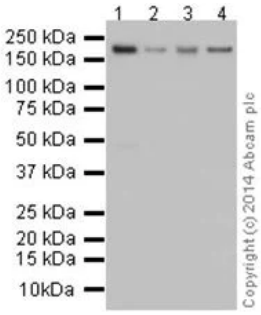
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 190 kDa

Observed band size: 193 kDa

Exposure time: 1min



Western blot - Anti-TIAM2 antibody [EPR16838] (ab199426)

TIAM2 Western blot staining using rabbit Anti-TIAM2 antibody

Blocking/dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-TIAM2 antibody [EPR16838] (ab199426) at 1/1000 dilution

Lane 1:
Rat brain lysate at 10 µg

Lane 2:
RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 3:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate at 10 mg/mL

Lane 4:
NIH/3T3 (mouse embryo fibroblast cells) whole cell lysate at 10 µg

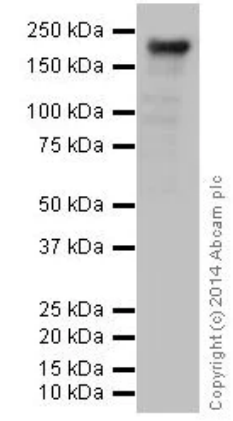
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 190 kDa

Observed band size: 193 kDa

Exposure time: 1min



Western blot - Anti-TIAM2 antibody [EPR16838] (ab199426)

Blocking/dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-TIAM2 antibody [EPR16838] (ab199426) at 1/1000 dilution

All lanes:
C6 (rat glial tumor cells) whole cell lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 190 kDa

Observed band size: 193 kDa

Exposure time: 1min

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