abcam

ab11424

Anti-S1P1/EDG1 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Mouse S1pr1 aa 350 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link O08530
Purification technique	Affinity purification Immunogen
Specificity	ab11424 detects S1P1/EDG1 protein in transfected human cell samples. This antibody shows no cross-reactivity to S1P3.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC

Tested

Species	Mouse
Dilution info	2 µg/mL
Notes	-

Expected

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

Predicted

Species	Horse, Cow, Cat, Monkey, Human
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line
Dilution info	-
Notes	-

IP

Expected

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

Predicted

Species	Horse, Cow, Cat, Monkey
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line
Dilution info	-

Notes	-

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Rat
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Horse, Cow, Cat, Monkey
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line
Dilution info	-
Notes	-

WB

Tested

Species	Rat

Dilution info	1 µg/mL
Notes	Band represents recombinant S1P1 from transfected HEK293 cells.

Expected

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

Predicted

Species	Horse, Cow, Cat, Monkey, Human
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line
Dilution info	-
Notes	-

IHC-P

Expected

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

Predicted

Species	Horse, Cow, Cat, Monkey
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Transfected cell line
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Horse, Cow, Cat, Monkey, Human
Dilution info	-
Notes	-

Target data

See full target information S1PR1

Function

G-protein coupled receptor for the bioactive lysosphingolipid sphingosine 1-phosphate (S1P) that seems to be coupled to the G(i) subclass of heteromeric G proteins. Signaling leads to the activation of RAC1, SRC, PTK2/FAK1 and MAP kinases. Plays an important role in cell migration, probably via its role in the reorganization of the actin cytoskeleton and the formation of lamellipodia in response to stimuli that increase the activity of the sphingosine kinase SPHK1. Required for normal chemotaxis toward sphingosine 1-phosphate. Required for normal embryonic heart development and normal cardiac morphogenesis. Plays an important role in the regulation of sprouting angiogenesis and vascular maturation. Inhibits sprouting angiogenesis to prevent excessive sprouting during blood vessel development. Required for normal egress of mature T-cells from the thymus into the blood stream and into peripheral lymphoid organs. Plays a role in

	the migration of osteoclast precursor cells, the regulation of bone mineralization and bone homeostasis (By similarity). Plays a role in responses to oxidized 1-palmitoyl-2-arachidonoyl-sn-glycero-3-phosphocholine by pulmonary endothelial cells and in the protection against ventilator-induced lung injury.

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

Supplementary info

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

Activity summary	The S1P1 receptor also known as EDG1 is a G-protein-coupled receptor that plays a significant role in the sphingosine-1-phosphate (S1P) signaling pathway. With a molecular mass of approximately 43 kDa S1P1 is expressed in various tissues such as vascular endothelial cells immune cells and cardiac cells. The protein mediates the effects of sphingosine-1-phosphate a bioactive lipid that participates in various physiological processes.
Biological function summary	S1P1 is involved in the regulation of immune cell trafficking and vascular stability. As a part of a receptor complex it activates intracellular signaling cascades that influence cell migration and vascular maturation. By binding to S1P S1P1 controls the egress of lymphocytes from lymphoid tissues indicating its important role in immune surveillance and response.
Pathways	S1P1 serves as an important component in the S1P signaling pathway and the phosphoinositide 3-kinase (PI3K) pathway. In the S1P pathway it regulates endothelial cell barrier function and vascular maturation. In the PI3K pathway S1P1 influences cell survival and migration which relates it to protein kinases like Akt and other signaling molecules that further modify cellular responses.
Associated diseases and disorders	S1P1 is implicated in multiple sclerosis (MS) and cancer progression. In MS S1P1 modulation affects lymphocyte trafficking which is the mechanism behind the action of fingolimod (FTY720) a therapeutic agent for the disease. S1P1 also connects to VEGF and other angiogenic factors in cancer where it influences tumor

angiogenesis and metastasis. Understanding these connections highlights the potential for targeting S1P1 in therapeutic strategies for these conditions.

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

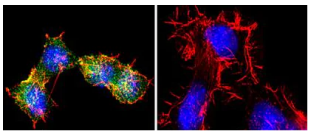
We do not recommend this combination. It is not covered by our product promise.

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.

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Terms & Conditions.

2 product images



Immunocytochemistry - Anti-S1P1/EDG1 antibody (ab11424)

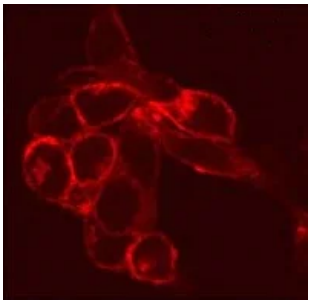
S1P1/EDG1 Immunocytochemistry staining using rabbit Anti-S1P1/EDG1 antibody

Immunocytochemical analysis of Neuro-2a cells, labeling S1P1/EDG1 with ab11424. Cells were fixed in 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 1% BSA for 1 hour at room temperature. Immunostaining with anti-EDG1 diluted 2µg/ml in 0.1% BSA for 3 hours at room temperature.
Green staining - ab11424

Blue staining - DAPI for nuclear localization

Red staining - F-actin

The right-most image is a control (no primary antibody staining).



Immunocytochemistry/ Immunofluorescence - Anti-S1P1/EDG1 antibody (ab11424)

ab11424 staining S1P1/EDG1 in transfected CCL39 cells by Immunocytochemistry/ Immunofluorescence.

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