abcam

ab283515

Anti-S1P1/EDG1 antibody [EPR23535-103] - 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	EPR23535-103
Purification technique	Affinity purification Protein A
Concentration	1.051 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-

Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Human, Rat
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. 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 conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab283515 is the carrier-free version of ab283502.

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	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

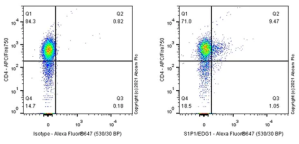
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

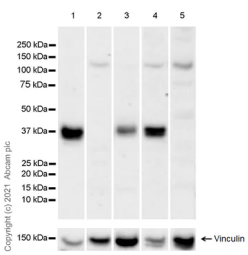
2 product images



Flow Cytometry - Anti-S1P1/EDG1 antibody [EPR23535-103] - BSA and Azide free (ab283515)

S1P1/EDG1 Flow Cytometry staining using rabbit Anti-S1P1/EDG1 antibody

This data was developed using ab283502, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of mouse thymocytes cells labelling S1P1/EDG1 with ab283502 at 1/50 dilution (1µg / Right) compared with a Rabbit monoclonal IgG (ab172730 / Left) isotype control. Goat anti-Rabbit IgG (Alexa Fluor® 647, ab150079) at 1/2000 dilution was used as the secondary antibody. S1P1 is expressed in CD4 single positive thymocyte (PMID 14732704). Cells were stained with rabbit IgG or ab283502, then stained with anti-CD4 conjugated to APC/Fire750. Gated on viable cells.



Western blot - Anti-S1P1/EDG1 antibody [EPR23535-103] - BSA and Azide free (ab283515)

S1P1/EDG1 Western blot staining using rabbit Anti-S1P1/EDG1 antibody

This data was developed using ab283502, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The molecular weight observed is consistent with what has been described in the literature (PMID:19810093, 14688232).

Low expression: testis (PMID:9931453).

Extra band around 110 kDa is observed.

Samples are non-boiled as boiling may cause protein aggregates.

Exposure time: 70 seconds.

All lanes:
Western blot - Anti-S1P1/EDG1 antibody [EPR23535-103] (ab283502) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

Lane 2:
Mouse testis tissue lysate at 20 µg

Lane 3:
Mouse lung tissue lysate at 20 µg

Lane 4:
Rat brain tissue lysate at 20 µg

Lane 5:
Rat testis tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 43 kDa

Observed band size: 40 kDa

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