10320 Camino Santa Fe, Suite G
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Anti-S1P1 Antibody
Mouse Monoclonal Antibody
Catalog # ABV12027

Specification

Anti-S1P1 Antibody - Product Information

Application	**WB, IF, E, IP**
Primary Accession	P21453
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG2a**

Anti-S1P1 Antibody - Additional Information

Gene ID 1901

Application & Usage **WB: HUVEC cells, IP: CHO-S1P1-GFP cell membranes, IF: HUVEC cells**

Other Names
S1P Receptor 1, S1PR1, Sphingosine 1-Phosphate Receptor 1, Endothelial differentiation GProtein Coupled Receptor 1, EDG-1.

Target/Specificity
S1PR1

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
Phosphate Buffer 10mM - NaCl 0.15M - pH 7,4

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Anti-S1P1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Anti-S1P1 Antibody - Protein Information

Name S1PR1

Synonyms CHEDG1, EDG1

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.

Cellular Location
Cell membrane; Multi-pass membrane protein. Endosome. Membrane raft. Note=Recruited to caveolin-enriched plasma membrane microdomains in response to oxidized 1-palmitoyl-2-arachidonoyl-sn-glycero-3-phosphocholine. Ligand binding leads to receptor internalization

Tissue Location
Endothelial cells, and to a lesser extent, in vascular smooth muscle cells, fibroblasts, melanocytes, and cells of epithelioid origin

Anti-S1P1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-S1P1 Antibody - Images

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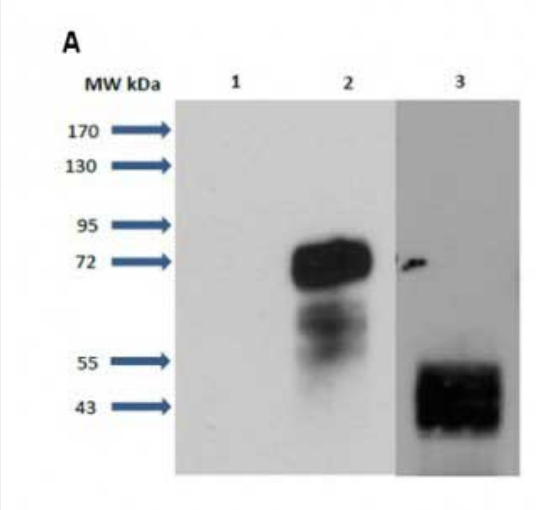
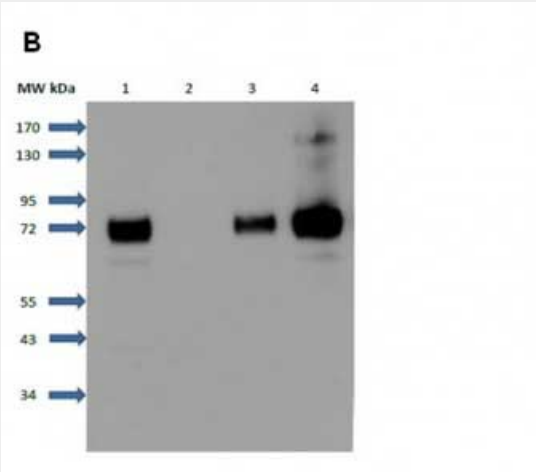
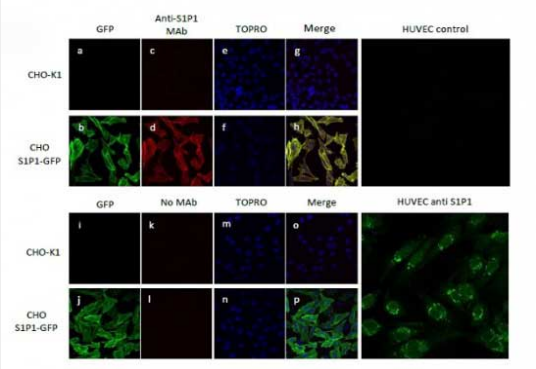


FigA. Detection of S1P1 receptors in transfected cells and human umbilical vein endothelial cells (HUVEC)



Immunoprecipitation of S1P1 receptors



Immunofluorescence detection of S1P1 receptors in transfected cells and HUVEC

Anti-S1P1 Antibody - Background

Sphingosine 1-Phosphate Receptor 1 (S1P1) is a multi-pass cell membrane protein that belongs to the Gprotein coupled receptor superfamily (GPCR). S1P1 is a receptor for the lysosphingolipid sphingosine 1- phosphate (S1P). S1P is a bioactive lysophospholipid that elicits diverse physiological effect on most types of cells and tissues. This inducible epithelial cell G-protein-coupled receptor

may be involved in the processes that regulate the differentiation of endothelial cells. Clinical significance of S1P1 encompasses various diseases including cancer and multiple sclerosis. S1P1 seems to be coupled to the G(i/o) subclass of heteromeric G proteins