

Product Information

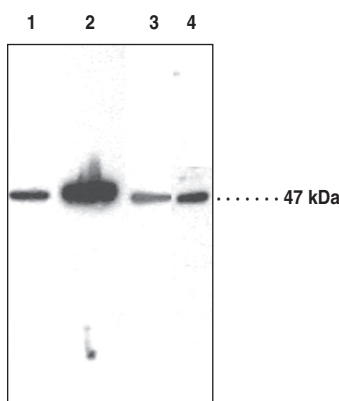


S1P₁ Polyclonal Antibody

Catalog No. 10005228 • Lot No. XXXXX

- Synonyms:** EDG-1, S1PR1, Sphingosine-1-phosphate Receptor 1
- Contents:** This vial contains XXX µg peptide affinity-purified IgG in XXX µl TBS, pH 7.4, containing XX glycerol, XX BSA, and 0.02% sodium azide
- Host:** Rabbit
- Antigen:** Human S1P₁ amino acids 241-253 (ISKASRSSEKSLA). The sequence is identical among mouse, rat, and pig S1P₁.
- Cross-reactivity:** (+) Human, murine, porcine, and rat S1P₁; other species not tested.
- Stability:** ≥1 year at -20°C
- Applications:** Recommended starting dilutions for western blot: XX µg/ml, immunohistochemistry (formalin-fixed paraffin-embedded sections): XX µg/ml, and immunocytochemistry: XX µg/ml. Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

Sphingosine-1-phosphate (S1P) exerts its activity by binding to five distinct G-protein-coupled receptors, S1P₁/EDG-1, S1P₂/EDG-5, S1P₃/EDG-3, S1P₄/EDG-6, and S1P₅/EDG-8.^{1,2} S1P₁ primarily couples with pertussis toxin-sensitive G_{i/o} proteins to mediate S1P-induced cell proliferation, survival, migration, cytoskeletal organization, and morphogenesis.¹⁻³ Expression of S1P₁ is abundant in embryological vasculature and is ubiquitously expressed in adult cells suggesting diverse physiological functions of this receptor.² The human and murine S1P₁ receptors have 382 amino acids with an estimated molecular weight of 43 kDa. Glycosylation at the N-terminal extracellular domain may cause the protein to migrate at a higher position in SDS-PAGE.⁴ Cayman's S1P₁ polyclonal antibody detects the receptor at 47 kDa by western blot analysis. The antibody can also be used for immunocytochemistry and immunohistochemistry to study expression patterns of this protein.



Lane 1: Human liver microsomes (15 µg)
Lane 2: Murine brain homogenate (30 µg)
Lane 3: Porcine liver 10,000 x g supernatant (30 µg)
Lane 4: Rat brain homogenate (30 µg)

Laboratory Procedures

Immunocytochemistry (ICC)

1. Grow cells in 12 or 24 well plates until confluence.
2. Wash briefly with TBS, pH 7.4.
3. Fix the cells with 1% formaldehyde in TBS, pH 7.4, for 10 minutes.
4. Wash the cells 3 times with TBS containing 1% Triton-X 100 (TBST), 10 minutes each.
5. Incubate the cells with 10% normal serum (from the same species in which the secondary antibody is raised) in TBST for 30 minutes.
6. Incubate the cells with the antibody (recommended starting concentration of 4 µg/ml. The optimal working condition should be determined by titration) for 1 hour.
7. Wash the cells 3 times with TBST, 10 minutes each.
8. Incubate the cells in the dark for 1 hour with a fluorochrome-conjugated secondary antibody at a concentration recommended by the provider.
9. Wash the cells 3 times with TBST, 10 minutes each.

Examine the staining under a fluorescent microscope with appropriate filter. Store the plate at 4°C in the dark for later analysis if necessary.

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

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References

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2. Ishii, I., Fuckushima, N., Ye, X., *et al.* Lysophospholipid receptors: Signaling and biology. *Annu. Rev. Biochem.* **73**, 321-354 (2004).
3. Kluk, M.J. and Hla, T. Signaling of sphingosine-1-phosphate *via* the S1P/EDG-family of G-protein-coupled receptors. *Biochim. Biophys. Acta* **1582**, 72-80 (2002).
4. Kohno, T., Wada, A., and Igarashi, Y. N-glycans of sphingosine 1-phosphate receptor Edg-1 regulate ligand-induced receptor internalization. *FASEB J.* **16**, 983-992 (2002).

Related Products

1-Oleoyl Lysophosphatidic Acid (sodium salt) - Cat. No. 62215 • Sphingosine-1-phosphate - Cat. No. 62570 • N,N-Dimethylsphingosine - Cat. No. 62575
• LPA₃ Polyclonal Antibody - Cat. No. 10004840 • FTY720 - Cat. No. 10006292 • S1P₁ Blocking Peptide - Cat. No. 10006616

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