

# Product Information

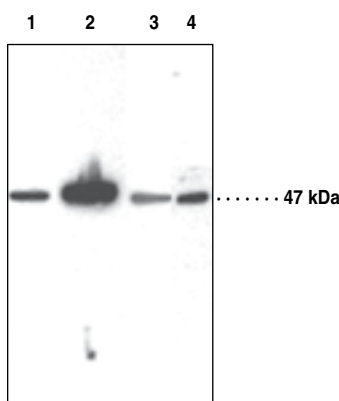


## S1P<sub>1</sub> Polyclonal Antibody

Item No. 10005228 • Lot No. XXXXX

- Synonyms:** EDG-1, S1PR1, Sphingosine-1-phosphate Receptor 1
- Contents:** This vial contains *lot specific* µg peptide affinity-purified IgG in *lot specific* µl TBS, pH 7.4, containing *lot specific* glycerol, *lot specific* BSA, and 0.02% sodium azide
- Host:** Rabbit
- Antigen:** Human S1P<sub>1</sub> amino acids 241-253 (ISKARSSSEKSLA). The sequence is identical among mouse, rat, and pig S1P<sub>1</sub>.
- Cross-reactivity:** (+) Human, mouse, porcine, and rat S1P<sub>1</sub>; other species not tested.
- Stability:** ≥1 year at -20°C
- Applications:** Recommended starting dilutions for western blot: *lot specific* µg/ml, immunohistochemistry (formalin-fixed paraffin-embedded sections): *lot specific* µg/ml, and immunocytochemistry: *lot specific* 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, S1P<sub>1</sub>/EDG-1, S1P<sub>2</sub>/EDG-5, S1P<sub>3</sub>/EDG-3, S1P<sub>4</sub>/EDG-6, and S1P<sub>5</sub>/EDG-8.<sup>1,2</sup> S1P<sub>1</sub> primarily couples with pertussis toxin-sensitive G<sub>i/o</sub> proteins to mediate S1P-induced cell proliferation, survival, migration, cytoskeletal organization, and morphogenesis.<sup>1-3</sup> Expression of S1P<sub>1</sub> is abundant in embryological vasculature and is ubiquitously expressed in adult cells suggesting diverse physiological functions of this receptor.<sup>2</sup> The human and mouse S1P<sub>1</sub> 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.<sup>4</sup> Cayman's S1P<sub>1</sub> 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.

### Cayman Chemical

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**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.

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## References

1. Takuwa, Y., Takuwa, N., and Sugimoto, N. The Edg family G protein-coupled receptors for lysophospholipids: Their signaling properties and biological activities. *J. Biochem.* **131**, 767-771 (2002).
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).

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