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ProductInformation

$S1P_4$ C-Terminal Blocking Peptide Endothelial Cell Differentiation Gene 6, (EDG-6)

Product Number **E9654**

Product Description

The EDG-6 C-terminal blocking peptide is a synthetic peptide (~2.5 kDa) derived from C-terminal domain of the full length EDG-6 (Endothelial Cell Differentiation Gene 6) receptor (~160 kDa). The peptide is used to immunize rabbits and raise Anti-EDG-6 antibody. It is also used as a blocking peptide in immunoblotting applications with Anti-EDG-6 polyclonal and monoclonal antibodies (Product Numbers E7653, E9529).

The lysosphingolipid sphingosine-1-phosphate (S1P) and the structurally related lipid lysophosphatidic acid (LPA) elicit a wide spectrum of biological responses in a variety of cell types, including calcium mobilization, mitogenesis, cell-shape changes, migration and contraction. Recent studies have identified the existence of the G protein-coupled heptahelical receptor subfamily named Endothelial Cell Differentiation Genes (EDG), which consists of two receptor subgroups specific for S1P and LPA. The S1P receptor subgroup comprises five members, i.e. EDG-1, 3, 5, 6, and 8, with considerable amino acid similarity among them. The LPA subgroup includes EDG-2, 4, and 7.[1, 2]

EDG-6 is specifically expressed in fetal and adult lymphoid, hematopoietic and lung tissue. The 384-amino acid EDG-6 receptor protein has 7 trans-membrane domains. The expression pattern of EDG-6 is strongly conserved in human and mouse. Homology of EDG-6 to the known SP1 receptors EDG-1, 3, and 5 and to the LPA receptors EDG-2 and 4 suggest that its ligand might be a lysophospholipid or lysosphingo-lipid.[3, 4]

Reagent

EDG-6, C-terminal, at approximately 1 mg/ml, is supplied as a solution in phosphate buffered saline, pH 7.3.

Storage/Stability

For continuous use, store at –20 °C. Upon initial thawing freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing to prevent denaturing of the peptide. The product is stable for at least 12 months when stored appropriately

Procedure

Preincubate undiluted Anti-EDG-6 with EDG-6 peptide for 20 minutes at 37 °C. Use at least a 50 fold stoichiometric excess of peptide. After the incubation dilute antibody according to the appropriate antibody protocol and perform immunoblotting using RH7777 cells transfected with full length EDG-6 receptor. Preincubation of the antibody with immunizing peptide abrogated EDG-6 detection, while preincubation with a non-specific peptide had no effect.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Kupperman, E., et al., A sphingosine-1-phosphate receptor regulates cell migration during vertebrate heart development. Nature, **406**, 192-195 (2000).
2. Takuwa, Y., et al., Subtype-specific, differential activities of the EDG family receptor sphingosine-1-phosphate, a novel lysophospholipid mediator. Mol. Cell Endocrinol., **177**, 3-11 (2001).
3. Graler, M., et al., EDG6, a novel G-protein-coupled receptor related to receptors for bioactive lysophospholipids, is specifically expressed in lymphoid tissue. Genomics, **53,** 164-169 (1998).
4. Van Brocklyn, J.R., et al., Sphingosine-1-phosphate is a ligand for the G protein-coupled receptor EDG-6. Blood, **95**, 2624-2629 (2001).

AH/JK 5/16/2004