

ADCY7 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP9389c

Specification

ADCY7 Antibody (Center) Blocking Peptide - Product Information

Primary Accession [P51828](#)

ADCY7 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 113

Other Names

Adenylate cyclase type 7, ATP pyrophosphate-lyase 7, Adenylate cyclase type VII, Adenylyl cyclase 7, ADCY7, KIAA0037

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ADCY7 Antibody (Center) Blocking Peptide - Protein Information

Name [ADCY7 \(HGNC:238\)](#)

Function

Adenylate cyclase that mediates formation of both cyclic AMP (cAMP) and cyclic di-AMP (c-di-AMP) (PubMed:[11113152](http://www.uniprot.org/citations/11113152)), (PubMed:[18541530](http://www.uniprot.org/citations/18541530)), (PubMed:[23229509](http://www.uniprot.org/citations/23229509)). Acts as a key mediator of G protein-coupled receptor signaling by catalyzing the formation of cAMP downstream of G protein-coupled receptors (PubMed:[18541530](http://www.uniprot.org/citations/18541530)), (PubMed:[23229509](http://www.uniprot.org/citations/23229509)). Functions in G protein-coupled receptor signaling cascades activated by thrombin, sphingosine 1-phosphate, dopamine and anaphylatoxin C5a (PubMed:[18541530](http://www.uniprot.org/citations/18541530)), (PubMed:[23229509](http://www.uniprot.org/citations/23229509)), (PubMed:[23842570](http://www.uniprot.org/citations/23842570)). Mediates regulation of cAMP synthesis through synergistic action of the G alpha protein G(s) (GNAS) with G(13) (GNA13) (PubMed:[18541530](http://www.uniprot.org/citations/18541530)), (PubMed:[23229509](http://www.uniprot.org/citations/23229509)). Also involved in inflammation by acting as a diadenylate cyclase that catalyzes the condensation of 2 ATP

molecules into c-di-AMP (By similarity). Following activation by TLR9, mediates formation of c-di-AMP, which directly activates NLRP3, thereby promoting assembly and maturation of the NLRP3 inflammasome (By similarity). It is also required for the optimal functions of B- and T cells during adaptive immune responses by regulating cAMP synthesis in both B- and T-cells (By similarity).

Cellular Location

Membrane; Multi-pass membrane protein.

ADCY7 Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

ADCY7 Antibody (Center) Blocking Peptide - Images

ADCY7 Antibody (Center) Blocking Peptide - Background

ADCY7 encodes a membrane-bound adenylate cyclase that catalyses the formation of cyclic AMP from ATP and is inhibitible by calcium. The product of this gene is a member of the adenylyl cyclase class-4/guanylyl cyclase enzyme family that is characterized by the presence of twelve membrane-spanning domains in its sequences.

ADCY7 Antibody (Center) Blocking Peptide - References

Townsend, P.D., et al. J. Biol. Chem. 284(2):784-791(2009)Tabakoff, B., et al. BMC Biol. 7, 70 (2009)
Jiang, L.I., et al. J. Biol. Chem. 283(34):23429-23439(2008)Kou, J., et al. Alcohol. Clin. Exp. Res. 31(9):1467-1472(2007)Hines, L.M., et al. J. Neurosci. 26(48):12609-12619(2006)