

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

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**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:<a href="http://www.uniprot.org/citations/11113152" target="\_blank">11113152</a>, PubMed:<a href="http://www.uniprot.org/citations/18541530" target="\_blank">18541530</a>, PubMed:<a href="http://www.uniprot.org/citations/23229509" target="\_blank">23229509</a>). Acts as a key mediator of G protein-coupled receptor signaling by catalyzing the formation of cAMP downstream of G protein- coupled receptors (PubMed:<a href="http://www.uniprot.org/citations/18541530" target="\_blank">18541530</a>, PubMed:<a href="http://www.uniprot.org/citations/23229509" target="\_blank">23229509</a>). Functions in G protein-coupled receptor signaling cascades activated by thrombin, sphingosine 1-phosphate, dopamine and anaphylatoxin C5a (PubMed:<a href="http://www.uniprot.org/citations/18541530" target="\_blank">18541530</a>, PubMed:<a href="http://www.uniprot.org/citations/23229509" target="\_blank">23229509</a>, PubMed:<a href="http://www.uniprot.org/citations/23842570" target="\_blank">23842570</a>). Mediates regulation of cAMP synthesis through synergistic action of the G alpha protein G(s) (GNAS) with G(13) (GNA13) (PubMed:<a href="http://www.uniprot.org/citations/18541530" target="\_blank">18541530</a>, PubMed:<a href="http://www.uniprot.org/citations/23229509" target="\_blank">23229509</a>). 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 inhibitable by calcium. The product of this gene is a member of the adenyl 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)