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ADCY8 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP8858c

Specification

ADCY8 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P40145

ADCY8 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 114

Other Names
Adenylate cyclase type 8, ATP pyrophosphate-lyase 8, Adenylate cyclase type VIII, Adenylyl cyclase 8, AC8, Ca(2+)/calmodulin-activated adenylyl cyclase, ADCY8

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8858c was selected from the Center region of human ADCY8. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

ADCY8 Antibody (Center) Blocking Peptide - Protein Information

Name ADCY8

Function
Catalyzes the formation of cAMP in response to calcium entry leadings to cAMP signaling activation that affect processes suche as synaptic plasticity and insulin secretion. Plays a role in many brain functions, such as learning, memory, drug addiction, and anxiety modulation through regulation of synaptic plasticity by modulating long-term memory and long-term potentiation (LTP) through CREB transcription factor activity modulation. Plays a central role in insulin secretion by controlling glucose homeostasis through glucagon- like peptide 1 and glucose signaling pathway and maintains insulin secretion through calcium-dependent PKA activation leading to vesicle pool replenishment. Also, allows PTGER3 to induce potentiation of PTGER4-mediated PLA2 secretion by switching from a negative to a positive regulation, during the IL1B induced-dedifferentiation of smooth muscle cells.

Cellular Location
Cell membrane {ECO:0000250|UniProtKB:P97490}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P97490}. Basolateral cell membrane {ECO:0000250|UniProtKB:P97490}. Apical cell membrane {ECO:0000250|UniProtKB:P97490}. Synapse {ECO:0000250|UniProtKB:P97490} Cell projection, dendrite {ECO:0000250|UniProtKB:P97490}. Cell projection, axon {ECO:0000250|UniProtKB:P97490}. Presynaptic cell membrane {ECO:0000250|UniProtKB:P97490}. Postsynaptic density {ECO:0000250|UniProtKB:P97490}. Membrane raft {ECO:0000250|UniProtKB:P40146}. Membrane, coated pit {ECO:0000250|UniProtKB:P40146}. Cytoplasmic vesicle, clathrin-coated vesicle membrane {ECO:0000250|UniProtKB:P40146}. Membrane, caveola {ECO:0000250|UniProtKB:P40146}. Note=Localized to dendritic arbors (By similarity). Monomeric N-glycosylated species localizes in membrane raft. In contrast, monomeric unglycosylated forms are enriched in clathrin-coated pits and vesicles. Dimers are also localized outside of membrane rafts. Membrane raft localization and integrity is indispensable for CCE-stimulated adenylate cyclase activity (By similarity). {ECO:0000250|UniProtKB:P40146, ECO:0000250|UniProtKB:P97490}

Tissue Location
Detected in brain cortex (PubMed:1715695). Expressed in islet (PubMed:25403481).

ADCY8 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

ADCY8 Antibody (Center) Blocking Peptide - Images

ADCY8 Antibody (Center) Blocking Peptide - Background

ADCY8 is a membrane bound enzyme that catalyses the formation of cyclic AMP from ATP. The enzymatic activity is under the control of several hormones, and different polypeptides participate in the transduction of the signal from the receptor to the catalytic moiety. Stimulatory or inhibitory receptors (Rs and Ri) interact with G proteins (Gs and Gi) that exhibit GTPase activity and they modulate the activity of the catalytic subunit of the adenylyl cyclase provided by RefSeq].

ADCY8 Antibody (Center) Blocking Peptide - References

Martin,A.C.,et.al., Mol. Pharmacol. 75 (4), 830-842 (2009)