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ADCY8 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8858c

Product Information

Application	IHC-P, FC, WB, E
Primary Accession	P40145
Other Accession	P40146, P97490
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22741
Calculated MW	140122
Antigen Region	946-972

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	This ADCY8 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 946-972 amino acids from the Central region of human ADCY8.
Dilution	IHC-P~~1:100~500 FC~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ADCY8 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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).

Background

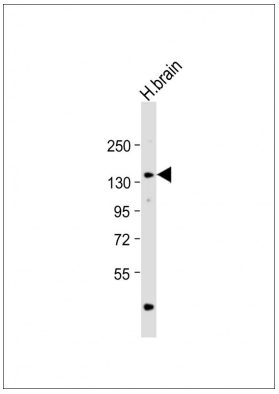
ADCY8 is a membrane bound enzyme that catalyses the formation of cyclic AMP from ATP. The enzymatic activity is under the control of several hormones, and different polypeptides participate in the transduction of the signal from the receptor to the catalytic moiety. Stimulatory or inhibitory receptors (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].

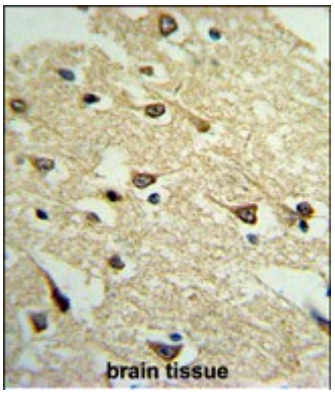
References

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

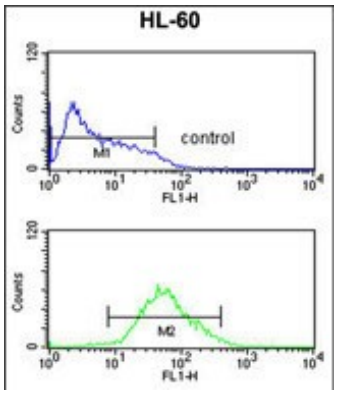
Images

Anti-ADCY8 Antibody (Center) at 1:1000 dilution + human brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 140 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





Formalin-fixed and paraffin-embedded mouse brain tissue reacted with ADCY8 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



ADCY8 Antibody (Center) (Cat. #AP8858c) flow cytometric analysis of HL-60 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.