10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ADCY7 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9389c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P51828
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22830
Calculated MW	120308
Antigen Region	510-539

Additional Information

Gene ID	113
Other Names	Adenylate cyclase type 7, ATP pyrophosphate-lyase 7, Adenylate cyclase type VII, Adenylyl cyclase 7, ADCY7, KIAA0037
Target/Specificity	This ADCY7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 510-539 amino acids from the Central region of human ADCY7.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 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	ADCY7 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ADCY7 (HGNC:238)
Function	Catalyzes the formation of cAMP in response to activation of G protein-coupled receptors (Probable). Functions in signaling cascades activated namely by thrombin and sphingosine 1-phosphate and mediates

regulation of cAMP synthesis through synergistic action of the stimulatory G alpha protein with GNA13 (PubMed:18541530, PubMed:23229509). Also, during inflammation, mediates zymosan-induced increase intracellular cAMP, leading to protein kinase A pathway activation in order to modulate innate immune responses through heterotrimeric G proteins G(12/13) (By similarity). Functions in signaling cascades activated namely by dopamine and C5 alpha chain and mediates regulation of cAMP synthesis through synergistic action of the stimulatory G protein with G beta:gamma complex (PubMed:23229509, PubMed:23842570). Functions, through cAMP response regulation, to keep inflammation under control during bacterial infection by sensing the presence of serum factors, such as the bioactive lysophospholipid (LPA) that regulate LPS-induced TNF-alpha production. However, 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.

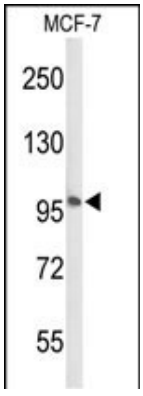
Background

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 adenylyl cyclase class-4/guanylyl cyclase enzyme family that is characterized by the presence of twelve membrane-spanning domains in its sequences.

References

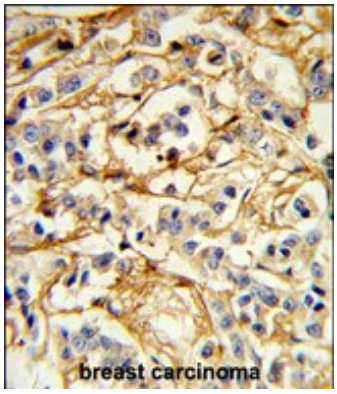
Townsend, P.D., et al. J. Biol. Chem. 284(2):784-791(2009)
Tabakoff, B., et al. BMC Biol. 7, 70 (2009) :
Jiang, L.I., et al. J. Biol. Chem. 283(34):23429-23439(2008)
Kou, J., et al. Alcohol. Clin. Exp. Res. 31(9):1467-1472(2007)
Hines, L.M., et al. J. Neurosci. 26(48):12609-12619(2006)

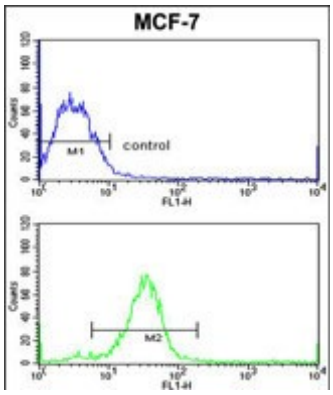
Images



Western blot analysis of ADCY7 Antibody (Center) (Cat. #AP9389c) in MCF-7 cell line lysates (35ug/lane). ADCY7 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human breast carcinoma reacted with ADCY7 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.





ADCY7 Antibody (Center) (Cat. #AP9389c) flow cytometric analysis of MCF-7 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.