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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	Adenylate cyclase that mediates formation of both cyclic AMP (cAMP) and cyclic di-AMP (c-di-AMP) (PubMed:11113152, PubMed:18541530, PubMed: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, PubMed:23229509). Functions in G protein-coupled receptor signaling cascades activated by thrombin, sphingosine 1-phosphate, dopamine and anaphylatoxin C5a (PubMed:18541530, PubMed:23229509, PubMed:23842570). Mediates regulation of cAMP synthesis through synergistic action of the G alpha protein G(s) (GNAS) with G(13) (GNA13) (PubMed:18541530, PubMed: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.

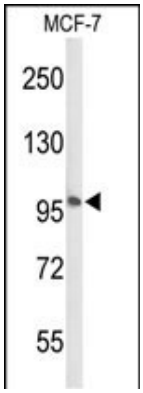
Background

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

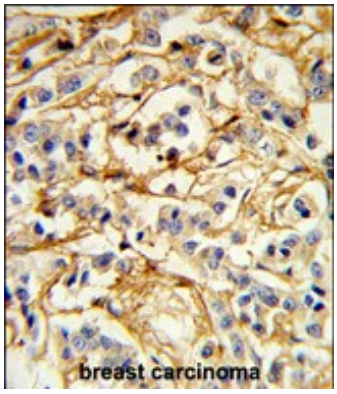
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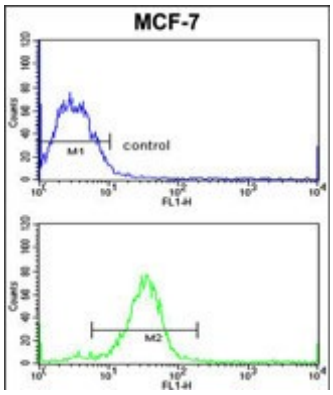
Images



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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.