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Anti-Adenylate Cyclase 7 Antibody

Catalog # AP61466

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P51828
Reactivity	Human, Mouse, Bovine, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	120308

Additional Information

Gene ID	113
Other Names	KIAA0037; Adenylate cyclase type 7; ATP pyrophosphate-lyase 7; Adenylate cyclase type VII; Adenylyl cyclase 7
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Adenylate Cyclase 7. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IH (1/50 - 1/200), IF/IC (1/50 - 1/200) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

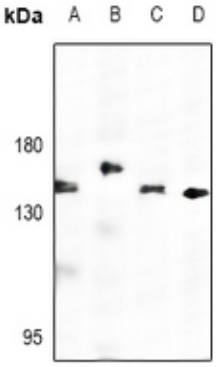
Protein Information

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

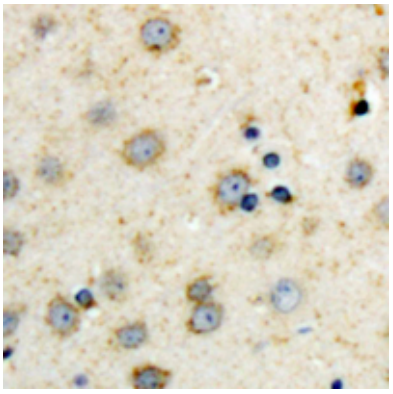
inflammasome (By similarity). It is also required for the optimal functions of B- and T cells during adaptive immune responses by regulating cAMP synthesis in both B- and T-cells (By similarity).

Cellular Location Membrane; Multi-pass membrane protein.

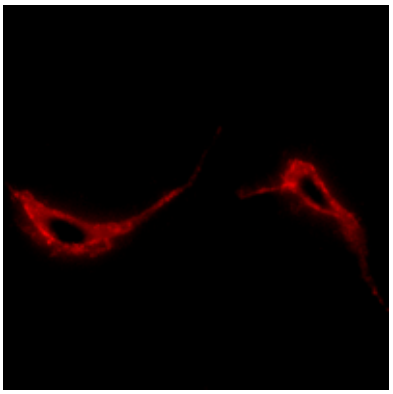
Images



Western blot analysis of Adenylate Cyclase 7 expression in BV2 (A), SHSY5Y (B), Panc1 (C), HEK293T (D) whole cell lysates. (Predicted band size: 120 kD; Observed band size: 140 kD)



Immunohistochemical analysis of Adenylate Cyclase 7 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Adenylate Cyclase 7 staining in NIH-3T3 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a Alexa Fluor 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

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