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ADRA1B Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19930b

Product Information

Application	WB, E
Primary Accession	P35368
Other Accession	P15823, P97717, NP_000670.1
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB41818
Calculated MW	56836
Antigen Region	380-409

Additional Information

Gene ID	147
Other Names	Alpha-1B adrenergic receptor, Alpha-1B adrenoreceptor, Alpha-1B adrenoceptor, ADRA1B
Target/Specificity	This ADRA1B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 380-409 amino acids from the C-terminal region of human ADRA1B.
Dilution	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	ADRA1B Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ADRA1B (HGNC:278)
Function	Alpha-1 adrenergic receptors are G protein-coupled receptors for catecholamines that signal through the G(q) family of G proteins, including

G(q) and G(11). Upon activation, they stimulate the phosphatidylinositol-calcium second messenger pathway, leading to calcium release from intracellular stores and activation of protein kinase C (By similarity). ADRA1B binds the catecholamine ligands norepinephrine and epinephrine (PubMed:7815325, PubMed:8183249). Can also couple to G(14) and G(16) proteins (By similarity). Nuclear ADRA1B forms heterooligomers with ADRA1A to regulate phenylephrine(PE)- stimulated ERK signaling in cardiac myocytes (PubMed:18802028, PubMed:22120526). At the plasma membrane, ADRA1B interacts with CAVIN4/MURC to regulates ERK activation in cardiomyocytes, contributing to the regulation of cardiac hypertrophy (PubMed:24567387).

Cellular Location

Nucleus membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Cytoplasm. Membrane, caveola. Note=Location at the nuclear membrane facilitates heterooligomerization and regulates ERK-mediated signaling in cardiac myocytes. Colocalizes with GNAQ, PLCB1 as well as LAP2 at the nuclear membrane of cardiac myocytes (PubMed:18802028, PubMed:22120526). Colocalizes with CAVIN4 and CAV3 at the plasma membrane and partly within the cytoplasm in cardiomyocytes (PubMed:24567387).

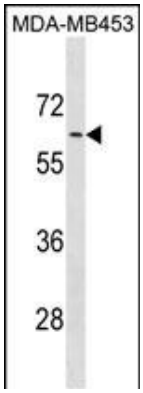
Background

Alpha-1-adrenergic receptors (alpha-1-ARs) are members of the G protein-coupled receptor superfamily. They activate mitogenic responses and regulate growth and proliferation of many cells. There are 3 alpha-1-AR subtypes: alpha-1A, -1B and -1D, all of which signal through the Gq/11 family of G-proteins and different subtypes show different patterns of activation. This gene encodes alpha-1B-adrenergic receptor, which induces neoplastic transformation when transfected into NIH 3T3 fibroblasts and other cell lines. Thus, this normal cellular gene is identified as a protooncogene. This gene comprises 2 exons and a single large intron of at least 20 kb that interrupts the coding region.

References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Pinheiro, A.P., et al. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B (5), 1070-1080 (2010) :
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Jensen, B.C., et al. Circ Heart Fail 2(6):654-663(2009)
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)

Images



ADRA1B Antibody (C-term) (Cat. #AP19930b) western blot analysis in MDA-MB453 cell line lysates (35ug/lane).This demonstrates the ADRA1B antibody detected the ADRA1B protein (arrow).