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

beta 2 Adrenergic Receptor (BAR2) Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7263A

Product Information

Application	WB, E
Primary Accession	P07550
Other Accession	NP_000015
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	46459
Antigen Region	1-30

Additional Information

Gene ID	154
Other Names	Beta-2 adrenergic receptor, Beta-2 adrenoreceptor, Beta-2 adrenoceptor, ADRB2, ADRB2R, B2AR
Target/Specificity	This beta 2 Adrenergic Receptor (BAR2) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human beta 2 Adrenergic Receptor (BAR2).
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	beta 2 Adrenergic Receptor (BAR2) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ADRB2 (HGNC:286)
Synonyms	ADRB2R, B2AR
Function	G protein-coupled receptor for catecholamines that couples to both G(s)

and G(i) proteins, activating bifurcated signaling pathways (PubMed:2831218, PubMed:7915137). ADRB2 binds epinephrine (Epi) with an approximately 30-fold greater affinity than norepinephrine (NE) (PubMed:2831218, PubMed:33093660, PubMed:7915137). In the heart, Epi- and NE-activated ADRB2 induces rapid and slow cardiomyocyte contraction rate, respectively (By similarity). Both NE and Epi promote coupling to G(s)/PKA pathway to regulate myocyte contraction rate (By similarity). Epi also promotes ADRB2 coupling to G(i) proteins to exert cardioprotective effects especially in the conditions of hypoxia and oxidative stress through the G(i)/PI3K/Akt signaling pathway (By similarity). ADRB2-G(s) signaling delivers proapoptotic signals in cardiomyocytes although G(i)-mediated survival effect appears to predominate (By similarity). ADRB2 also transduces signals independently of PKA to regulate cellular pH by modulating Na(+)/H(+) exchanger SLC9A3 function (PubMed:9560162).

Cellular Location

Cell membrane; Multi-pass membrane protein. Golgi apparatus. Note=Colocalizes with VHL at the cell membrane (PubMed:19584355). Activated receptors are internalized into endosomes prior to their degradation in lysosomes (PubMed:20559325). Activated receptors are also detected within the Golgi apparatus (PubMed:27481942).

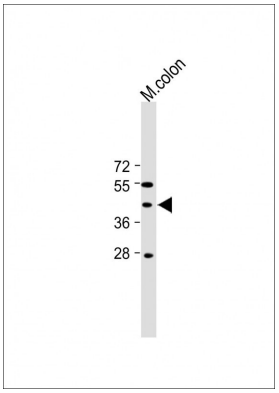
Background

This gene encodes beta-2-adrenergic receptor which is a member of the G protein-coupled receptor superfamily. This receptor is directly associated with one of its ultimate effectors, the class C L-type calcium channel Ca(V)1.2. This receptor-channel complex also contains a G protein, an adenylyl cyclase, cAMP-dependent kinase, and the counterbalancing phosphatase, PP2A. The assembly of the signaling complex provides a mechanism that ensures specific and rapid signaling by this G protein-coupled receptor. This gene is intronless. Different polymorphic forms, point mutations, and/or downregulation of this gene are associated with nocturnal asthma, obesity and type 2 diabetes.

References

Wolfarth,B., Metab. Clin. Exp. 56 (12), 1649-1651 (2007)
Cherezov,V., Science 318 (5854), 1258-1265 (2007)

Images



All lanes : Anti-beta 2 Adrenergic Receptor (BAR2) Antibody (N-term) at 1:1000 dilution Lane 1: mouse colon lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 47kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Enhanced Humoral Immunity in Mice Lacking CB1 and CB2 Receptors (Cnr1 -/- /Cnr2 -/- Mice) is not Due to Increased Splenic Noradrenergic Neuronal Activity.

- Matrix metalloproteinases cleave the beta2-adrenergic receptor in spontaneously hypertensive rats.