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BAR2 Antibody (S261)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7263d

Product Information

Application	WB, IHC-P, E
Primary Accession	P07550
Other Accession	NP_000015
Reactivity	Human, Mouse
Predicted	Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	46459
Antigen Region	236-264

Additional Information

Gene ID	154
Other Names	Beta-2 adrenergic receptor, Beta-2 adrenoreceptor, Beta-2 adrenoceptor, ADRB2, ADRB2R, B2AR
Target/Specificity	This BAR2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 236-264 amino acids from human BAR2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	BAR2 Antibody (S261) 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).

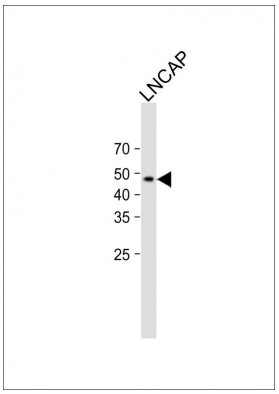
Background

Beta-2-adrenergic receptor 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.

References

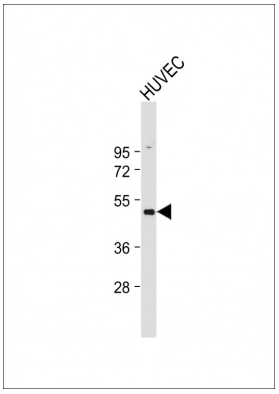
Wolfarth,B., Metab. Clin. Exp. 56 (12), 1649-1651 (2007)
Cherezov,V., Science 318 (5854), 1258-1265 (2007)

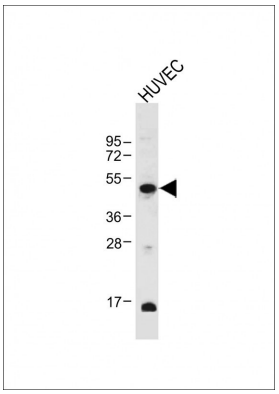
Images



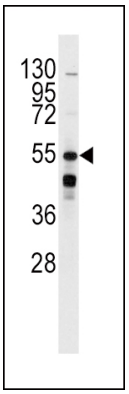
All lanes: Anti-BAR2(S261) Antibody at 1:1000 dilution + LNCAP whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 46 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

Anti-BAR2 Antibody (S261) at 1:2000 dilution + HUVEC whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 46 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

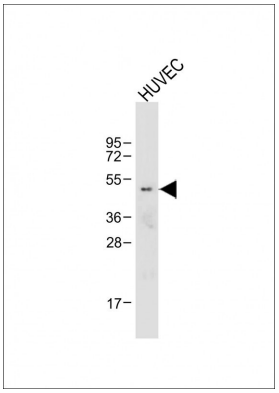




Anti-BAR2 Antibody (S261) at 1:1000 dilution + HUVEC whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 46 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

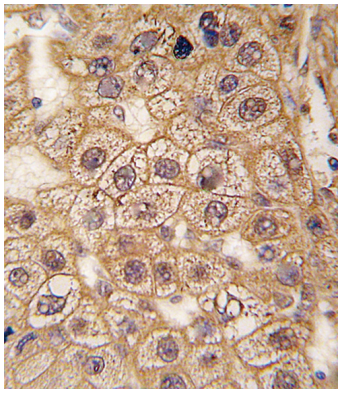


Western blot analysis of anti-BAR2 Antibody (S261) (Cat.#AP7263d) in mouse kidney lysates (35ug/lane). BAR2 (arrow) was detected using the purified Pab.



Anti-BAR2 Antibody (S261) at 1:1000 dilution + HUVEC whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 46 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with BAR2 Antibody (S261) (Cat.#AP7263d), 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.



Citations

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

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