

ADRB2

Reactivity: Human Mouse

Tested applications: WB IHC

Recommended Dilution: WB 1:500 - 1:2000 IHC 1:50 - 1:200

Calculated MW: 47kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human ADRB2

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonym:

ADRB2R; ADRBR; B2AR; BAR; BETA2AR;

Catalog #: A2048

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID: 154

Isotype: IgG

Swiss Prot: P07550

Purity: Affinity purification

For research use only.

Background:

There are four major Adrenergic Receptor (AR) subtypes (1, 2, 1, 2). Each of the subtypes has been classified by their unique responses to agonists and antagonists. Adrenergic receptors belong to the family of guanine nucleotide-binding, regulatory protein-coupled receptors (GPCR) which transverse the plasma membrane seven times. The transmembrane regions are hydrophobic and are interconnected by hydrophilic loops (1). 2-Adrenergic Receptor (2AR) is the most studied receptor of the catecholamine system. 2AR stimulation occurs through the catecholamines epinephrine (adrenaline) and norepinephrine (noradrenaline) acting as neuromodulators in the central nervous system and as hormones in the vascular system. 2AR activation results in coupling to heterotrimeric G proteins and activation of the second messengers cAMP and phosphatidylinositol, ultimately leading to changes in cellular physiology. GPCR kinases (GRKs) terminate 2AR signaling through phosphorylation of the GPCR and by recruiting -arrestin. -arrestin binding uncouples the receptor from the G protein, thereby terminating G proteinmediated signaling (desensitization), and initiating clathrin-mediated endocytosis (internalization) of 2AR (2). -adrenergic blocking agents (beta blockers) are drugs that block catecholamines from binding to AR and are prescribed for cardiac arrhythmias, cardioprotection after myocardial infarction (heart attack), and hypertension (3).

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