abcam

Product datasheet

Anti-beta 2 Adrenergic Receptor antibody ab176490

3 References 3 Images

Overview

Product name	Anti-beta 2 Adrenergic Receptor antibody
Description	Rabbit polyclonal to beta 2 Adrenergic Receptor
Host species	Rabbit
Tested applications	**Suitable for:** WB, ELISA
Species reactivity	**Reacts with:** Rat, Human **Predicted to work with:** Horse, Guinea pig, Hamster, Cat, Chimpanzee, Rhesus monkey, Gorilla, Orangutan
Immunogen	Synthetic peptide within Mouse beta 2 Adrenergic Receptor (N terminal). The exact sequence is proprietary. Database link: **P18762**
Positive control	Rat heart membrane extract, Rat brain stem, HEK293 cells expressing beta 2 Adrenergic Receptor, Lewis rat brain membranes
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab176490 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 47,65 kDa.
ELISA		Use at an assay dependent concentration. (Cellular and membrane)

Target

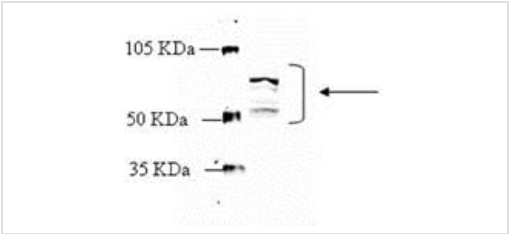
Function Beta-adrenergic receptors mediate the catecholamine-induced activation of adenylate cyclase through the action of G proteins. The beta-2-adrenergic receptor binds epinephrine with an approximately 30-fold greater affinity than it does norepinephrine.

Sequence similarities Belongs to the G-protein coupled receptor 1 family. Adrenergic receptor subfamily. ADRB2 sub-subfamily.

Post-translational modifications Palmitoylated; may reduce accessibility of Ser-345 and Ser-346 by anchoring Cys-341 to the plasma membrane. Agonist stimulation promotes depalmitoylation and further allows Ser-345 and Ser-346 phosphorylation.
Phosphorylated by PKA and BARK upon agonist stimulation, which mediates homologous desensitization of the receptor. PKA-mediated phosphorylation seems to facilitate phosphorylation by BARK. Phosphorylated upon DNA damage, probably by ATM or ATR. Phosphorylation of Tyr-141 is induced by insulin and leads to supersensitization of the receptor. Ubiquitinated. Agonist-induced ubiquitination leads to sort internalized receptors to the lysosomes for degradation. Deubiquitination by USP20 and USP33, leads to ADRB2 recycling and resensitization after prolonged agonist stimulation. USP20 and USP33 are constitutively associated and are dissociated immediately after agonist stimulation.

Cellular localization Cell membrane.

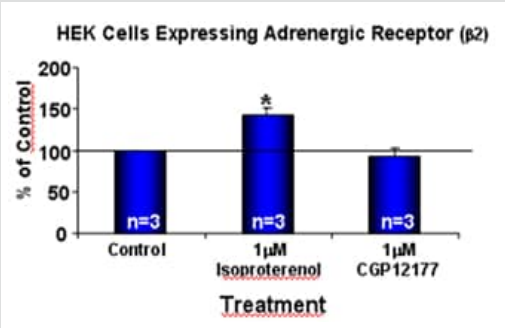
Images



Western blot - Anti-beta 2 Adrenergic Receptor antibody (ab176490)

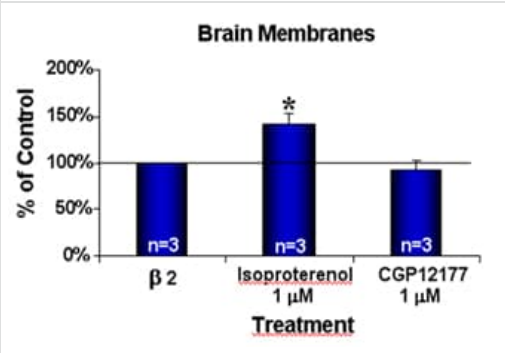
Anti-beta 2 Adrenergic Receptor antibody (ab176490) at 2.5 µg/ml
+ Rat heart membrane extract at 20 µg

Predicted band size: 47,65 kDa
Additional bands at: 65 kDa (possible post-translational modification)



ELISA - Anti-beta 2 Adrenergic Receptor antibody (ab176490)

Cellular ELISA: HEK293 cells expressing beta 2 Adrenergic Receptor were treated with indicated concentrations of agonist (Isoproterenol) and antagonist (CPG12177) and probed with ab176490 (1/1000 of a stock solution of 1μg/μL) by ELISA. Data from vehicle treated cells were taken as 100%. Results are the mean ± SEM (n=3).



ELISA - Anti-beta 2 Adrenergic Receptor antibody (ab176490)

Membrane ELISA: Lewis rat brain membranes (5 μg/well) were treated with indicated concentrations of agonist (Isoproterenol) and antagonist (CGP12177) and probed with ab176490 (1/1000 of a stock solution of 1μg/μL) by ELISA. Data from vehicle treated cells were taken as 100%. Results are the mean ± SEM (n=3).

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