Product datasheet

Anti-beta 1 Adrenergic Receptor antibody ab3442

Overview

Product name
Anti-beta 1 Adrenergic Receptor antibody

Description
Rabbit polyclonal to beta 1 Adrenergic Receptor

Host species
Rabbit

Tested applications
Suitable for: WB, ICC/IF, IHC-P

Species reactivity
Reacts with: Mouse, Rat, Cat, Human, Non human primates, African green monkey

Predicted to work with: Rhesus monkey, Prairie vole

Immunogen
Synthetic peptide corresponding to Mouse beta 1 Adrenergic Receptor aa 394-408.

Sequence:
HGDRPRASGCLARAG

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. Avoid freeze / thaw cycle.

Storage buffer
Preservative: 0.05% Sodium azide

Purity
Whole antiserum

Primary antibody notes
Adrenergic receptors (ARs) are members of the 7-transmembrane domain G-protein-coupled receptor superfamily that bind the endogenous catecholamines epinephrine and norepinephrine. Pharmacological, structural, and molecular cloning data indicate significant heterogeneity within this receptor family. Nine receptor subtypes have been identified thus far including three alpha-1 AR subtypes (1A/D, 1B, and 1C), three alpha-2 ARs (2A, 2B, and 2C), and three beta AR subtypes (1, 2, and 3). ARs participate in either the onset or maintenance of several disease states including hypertension, cardiac dysfunction (congestive heart failure, ischemia, arrhythmias), diabetes, glaucoma, depression, and impotence. BARs participate in diverse processes including development, behavior, cardiac function, smooth muscle tone, and metabolism. In gene-knockout experiments, the majority of mice that lack the B1AR gene die prenatally and those that do survive until adulthood display abnormal cardiac function. Other studies have shown that the direct regulation of cardiac B1AR density by thyroid hormones occurs at the transcriptional level and is modulated by the catecholamine sensitive-adenyl cyclase system. Evidence for the effects of cAMP on B1AR regulation has come from a study of members
of the cAMP response element (CRE) modulator (CREM) family of transcription factors in transformed cell lines.

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab3442 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>1/1000</td>
<td>1/1000. Detects a band of approximately 50.5 kDa (predicted molecular weight: 50 kDa).</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>1/100</td>
<td>Immunofluorescence staining of B1AR in mouse kidney distal tubule yields a pattern consistent with plasma membrane staining.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>1/200</td>
<td></td>
</tr>
</tbody>
</table>

Target

Function
Beta-adrenergic receptors mediate the catecholamine-induced activation of adenylate cyclase through the action of G proteins. This receptor binds epinephrine and norepinephrine with approximately equal affinity.

Sequence similarities
Belongs to the G-protein coupled receptor 1 family. Adrenergic receptor subfamily. ADRB1 sub-subfamily.

Domain
The PDZ domain-binding motif mediates competitive interactions with GOPC, MAGI3 and DLG4 and plays a role in subcellular location of the receptor.

Post-translational modifications
Homologous desensitization of the receptor is mediated by its phosphorylation by beta-adrenergic receptor kinase.

Cellular localization

Images
All lanes: Anti-beta 1 Adrenergic Receptor antibody (ab3442) at 1/1000 dilution

All lanes:

Lysates/proteins at 25 µg per lane.

Secondary

All lanes: HRP-conjugated Goat anti-Rabbit at 1/20000 dilution

Predicted band size: 50 kDa
Observed band size: 50 kDa
Additional bands at: 30 kDa. We are unsure as to the identity of these extra bands.

Western blot analysis of ADR-Beta-1 was performed by loading 25µg of various whole cell lysates onto a 4-20% Tris-HCl polyacrylamide gel. Proteins were transferred to a PVDF membrane and blocked with 5% Milk/TBST for at least 1 hour. Membranes were probed with ab3442 at a dilution of 1/1000 overnight at 4°C on a rocking platform. Membranes were washed in TBS-0.1% Tween 20 and probed with a goat anti-rabbit-HRP secondary antibody at a dilution of 1/20,000 for at least one hour. Membranes were washed and chemiluminescent detection performed.

Immunolocalization of B1AR in mouse kidney distal tubule using ab3442.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors