Product datasheet

Anti-alpha 2a Adrenergic Receptor antibody ab85570

Overview

Product name
Anti-alpha 2a Adrenergic Receptor antibody

Description
Rabbit polyclonal to alpha 2a Adrenergic Receptor

Host species
Rabbit

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

Species reactivity
Reacts with: Human

Predicted to work with: Mouse, Rat, Cow, Pig

Immunogen
Synthetic peptide conjugated to KLH derived from within residues 1 - 100 of Human alpha 2a Adrenergic Receptor. Read Abcam's proprietary immunogen policy

Positive control
Recombinant human alpha 2a Adrenergic Receptor protein (ab54291) can be used as a positive control in WB. This antibody gave a positive signal in Human small intestine and Human pancreas tissue lysates.

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 or -80°C. Avoid freeze / thaw cycle.

Storage buffer
Preservative: 0.02% Sodium Azide
Constituents: 1% BSA, PBS, pH 7.4

Purity
Immunogen affinity purified

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab85570 in the following tested applications.

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

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<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>ICC/IF</td>
<td>Use a concentration of 5 µg/ml.</td>
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### Target

**Function**
Alpha-2 adrenergic receptors mediate the catecholamine-induced inhibition of adenylate cyclase through the action of G proteins. The rank order of potency for agonists of this receptor is oxymetazoline > clonidine > epinephrine > norepinephrine > phenylephrine > dopamine > p-sympinephrine > p-tyramine > serotonin = p-octopamine. For antagonists, the rank order is yohimbine > phentolamine = mianserine > chlorpromazine = spiperone = prazosin > propanolol > alprenolol = pindolol.

**Sequence similarities**
Belongs to the G-protein coupled receptor 1 family. Adrenergic receptor subfamily. ADRA2A sub-subfamily.

**Cellular localization**
Cell membrane.

### Images

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<td>IHC-P</td>
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<td>Use a concentration of 1 µg/ml.</td>
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<tr>
<td>WB</td>
<td></td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 52 kDa (predicted molecular weight: 49 kDa).</td>
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**All lanes**: Anti-alpha 2a Adrenergic Receptor antibody (ab85570) at 1 µg/ml

**Lane 1**: Human pancreas tissue lysate - total protein (ab29816)

**Lane 2**: Human small intestine tissue lysate - total protein (ab29276)

Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes**: Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (HRP), pre-adsorbed at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size**: 49 kDa

**Observed band size**: 52 kDa

why is the actual band size different from the predicted?

**Exposure time**: 20 minutes
Alpha 2a Adrenergic Receptor contains a number of potential glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted.

ICC/IF image of ab85570 stained MCF7 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab85570, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM. This antibody also gave a positive result in 4% PFA fixed (10 min) Hek293 and HepG2 cells at 5µg/ml, and in 100% methanol fixed (5 min) HeLa, Hek293, HepG2 and MCF7 cells at 5µg/ml.

IHC image of alpha 2a Adrenergic Receptor staining in human Pancreas FFPE section, performed on a BondTM system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab85570, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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