

Product datasheet

Anti-beta 2 Adrenergic Receptor antibody [EPR707(N)] ab182136

Recombinant RabMAb

★★★★★ [5 Abreviews](#) [50 References](#) [7 Images](#)

Overview

Product name	Anti-beta 2 Adrenergic Receptor antibody [EPR707(N)]
Description	Rabbit monoclonal [EPR707(N)] to beta 2 Adrenergic Receptor
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, IHC-Fr Unsuitable for: Flow Cyt or ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human fetal liver, Human skeletal muscle, Mouse heart, Rat heart, Mouse kidney, Rat kidney, and A431 lysates; IHC-P: Rat stomach, Human stomach and Mouse cerebrum tissues; IHC-Fr: Mouse stomach tissue section.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

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: 40% Glycerol, PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number EPR707(N)
Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab182136 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	★★★★☆ (4)	1/1000 - 1/10000. Detects a band of approximately 68 kDa (predicted molecular weight: 46 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. For lower background staining, perform heat mediated antigen retrieval with citrate buffer pH 6. For unpurified use at 1/250. See <u>IHC antigen retrieval protocols</u> .
IHC-Fr	★★★★★ (1)	1/100. Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)

Application notes Is unsuitable for Flow Cyt or ICC/IF.

Target

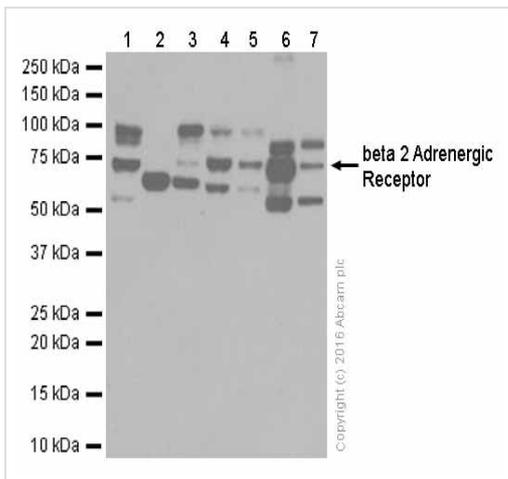
Function Beta-adrenergic receptors mediate the catecholamine-induced activation of adenylate cyclase through the action of G proteins. The beta-2-adrenergic receptor binds epinephrine with an approximately 30-fold greater affinity than it does norepinephrine.

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 [EPR707(N)] (ab182136)

All lanes : Anti-beta 2 Adrenergic Receptor antibody [EPR707(N)] (ab182136) at 0.1 µg/ml (purified)

Lane 1 : A431 (Human epidermoid carcinoma epithelial cell) whole cell lysates

Lane 2 : Human skeletal muscle lysates

Lane 3 : Human fetal liver lysates

Lane 4 : Mouse heart lysates

Lane 5 : Rat heart lysates

Lane 6 : Mouse kidney lysates

Lane 7 : Rat kidney lysates

Lysates/proteins at 20 µg per lane.

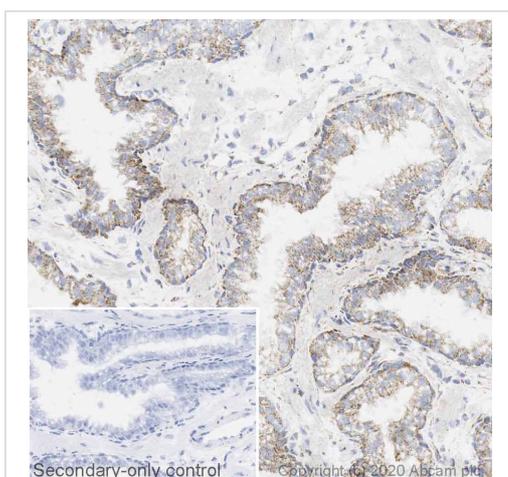
Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 46 kDa

Blocking and diluting buffer: 5% NFDM/TBST

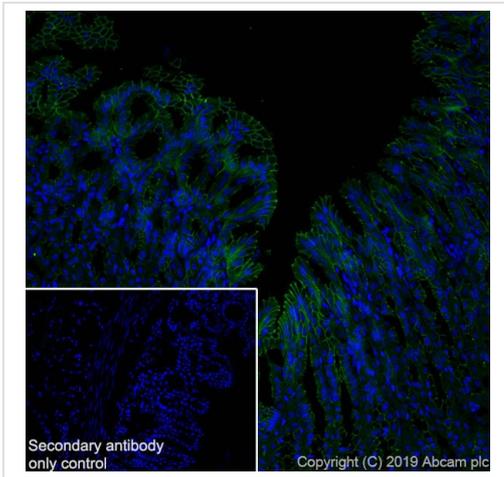
The 50-90kda bands detected by ab182136 are consistent with many literatures, like PMID: 2836733, PMID: 17570158, PMID: 11701618, PMID: 2545714, PMID: 16708760. These bands have not been confirmed experimentally.



Immunohistochemistry (Frozen sections) - Anti-beta 2 Adrenergic Receptor antibody [EPR707(N)] (ab182136)

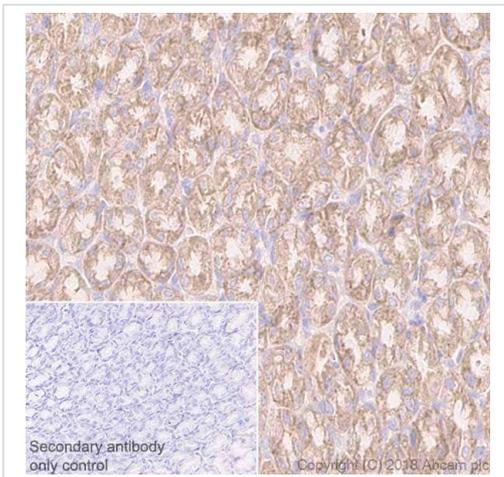
IHC image of beta 2 Adrenergic Receptor staining in a section of frozen human prostate carcinoma performed on a Leica BOND™ system using the standard protocol. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab182136, 1/750 dilution, for 15 mins 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. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



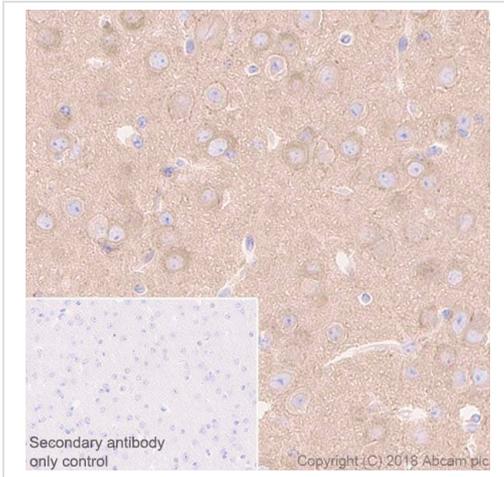
Immunohistochemistry (Frozen sections) analysis of mouse stomach tissue sections labeling beta 2 Adrenergic Receptor with Purified ab182136 at 1/100 (1.3 µg/ml). Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. DAPI was used as a counterstain.

Immunohistochemistry (Frozen sections) - Anti-beta 2 Adrenergic Receptor antibody [EPR707(N)] (ab182136)



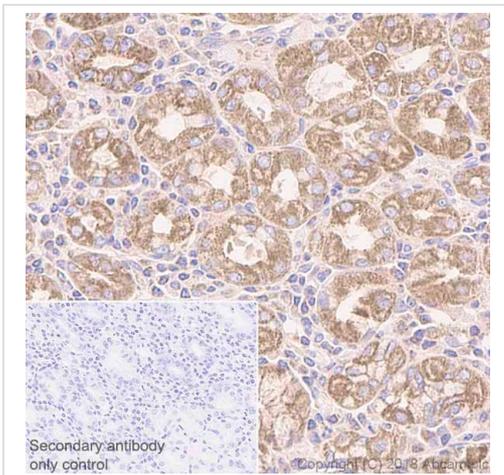
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat stomach tissue sections labeling beta 2 Adrenergic Receptor with Purified ab182136 at 1:100 dilution (1.28 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta 2 Adrenergic Receptor antibody [EPR707(N)] (ab182136)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse cerebrum tissue sections labeling beta 2 Adrenergic Receptor with Purified ab182136 at 1:100 dilution (1.28 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta 2 Adrenergic Receptor antibody [EPR707(N)] (ab182136)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human stomach tissue sections labeling beta 2 Adrenergic Receptor with Purified ab182136 at 1:100 dilution (1.28 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta 2 Adrenergic Receptor antibody [EPR707(N)] (ab182136)

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-beta 2 Adrenergic Receptor antibody

[EPR707(N)] (ab182136)

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