Anti-Nicotinic Acetylcholine Receptor alpha 7 antibody ab10096

Overview

Product name
Anti-Nicotinic Acetylcholine Receptor alpha 7 antibody

Description
Rabbit polyclonal to Nicotinic Acetylcholine Receptor alpha 7

Host species
Rabbit

Specificity
Several significant splice variants of the protein have been reported, but currently, we do not know, which variants are detected by this antibody.

Tested applications
Suitable for: IHC-P, WB

Species reactivity
Reacts with: Mouse, Rat, Human

Predicted to work with: Chicken, Cow, Cat, Dog

Immunogen
Synthetic peptide conjugated to KLH, selected from within the amino acid range 22-71 of Human Nicotinic Acetylcholine Receptor alpha 7. (Peptide available as ab101467.)

Positive control
HepG2 lysate and Mouse muscle lysate.

Properties

Form
Liquid

Storage instructions
Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Storage buffer
Preservative: 0.09% Sodium azide
Constituents: 2% Sucrose, PBS

Purity
Protein A purified

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab10096 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function
After binding acetylcholine, the AChR responds by an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane. The channel is blocked by alpha-bungarotoxin.

Sequence similarities
Belongs to the ligand-gated ion channel (TC 1.A.9) family. Acetylcholine receptor (TC 1.A.9.1) subfamily. Alpha-7/CHRNA7 sub-subfamily.

Cellular localization

Application | Abreviews | Notes
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IHC-P | | Use at an assay dependent concentration.
WB | | Use a concentration of 2.5 - 5 µg/ml. Detects a band of approximately 56 kDa (predicted molecular weight: 56 kDa). Can be blocked with Human Nicotinic Acetylcholine Receptor alpha 7 peptide (ab101467). Good results were obtained when blocked with 5% non-fat dry milk in 0.05% PBS-T.

Target

Function
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Cellular localization

Images

Western blot - Anti-Nicotinic Acetylcholine Receptor alpha 7 antibody (ab10096)
at 2.5 µg/ml + HepG2 cell lysate

**Predicted band size:** 56 kDa
NNK (NCI) (100 mg/kg) was administered to BALB/c mice. The mice were randomized into two groups; group one received the vehicle (PBS) \((n=8)\) and group two received nicotine \((n=8)\) by i.p. injection at a dose of 1 mg/kg three times a week for 28 weeks. Lungs from the mice were fixed in 10% neutral-buffered formalin before processing into paraffin blocks. Sections were subjected to microwave 'antigen retrieval' for 20 minutes on 70% power, with a 1 minute cooling period after every 5 minutes, in 0.01 M sodium citrate, pH 6.0. Slides were stained either with H&E alone or with ab10096 against α7 nAChR \((1:50\) dilution). For color development the slides were treated with peroxidase substrate kit from Vector labs and developed using DAB as chromogen. After a final rinse in dH2O, sections were lightly counterstained in hematoxylin, dehydrated and mounted.

WB using ab10096. Blots were incubated with ab10096 for at least 1 hour and for 30-90 minutes for the secondary antibody. 3% BSA and 10% FBS was used as blocking solution. anti- bungarotoxin was added in excess before precipitation in lanes 2 and 4. Nicotinic acetylcholine receptor alpha 7 precipitates as a double band (as shown by Drisdel and Green, 2000). The higher bands \((79-122 \text{ kD})\) are probably dimeric and trimeric forms of the protein. Review by Andreas Wiesner submitted 7 May 2004.

**Western blot - Anti-Nicotinic Acetylcholine Receptor alpha 7 antibody (ab10096)**

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