Product datasheet

Anti-GABA A Receptor alpha 1 antibody ab33299

Overview

Product name  Anti-GABA A Receptor alpha 1 antibody
Description  Rabbit polyclonal to GABA A Receptor alpha 1
Host species  Rabbit
Specificity  This antibody is specific for the GABA A Receptor a1 subunit.
Tested applications  Suitable for: IHC-P, WB, IP, IHC-Fr
Species reactivity  Reacts with: Mouse, Rat, Chicken, Human
Predicted to work with: Cow, Cynomolgus monkey
Immunogen  Synthetic peptide:
QPSQDELKDNTTVFT-C,
, corresponding to N terminal amino acids 1-15 of the mature Rat GABA A Receptor alpha 1 containing a cysteine at the C terminus for linkage to a carrier protein.
Positive control  WB and IP: Rat brain microsomal tissue extract

Properties

Form  Liquid
Storage buffer  pH: 7.40
Preservative: 0.05% Sodium azide
Constituents: 0.184% Tris glycine, 30% Glycerol, 0.87% Sodium chloride
Purity  Protein A purified
Clonality  Polyclonal
Isotype  IgG

Applications

Our Abpromise guarantee covers the use of ab33299 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function

GABA, the major inhibitory neurotransmitter in the vertebrate brain, mediates neuronal inhibition by binding to the GABA/benzodiazepine receptor and opening an integral chloride channel.

Involvement in disease

Defects in GABRA1 are the cause of childhood absence epilepsy type 4 (ECA4) [MIM:611136]. A subtype of idiopathic generalized epilepsy characterized by onset at age 6-7 years, frequent absence seizures (several per day) and bilateral, synchronous, symmetric 3-Hz spike waves on EEG. During adolescence, tonic-clonic and myoclonic seizures may develop. Absence seizures may either remit or persist into adulthood.

Defects in GABRA1 are the cause of juvenile myoclonic epilepsy type 5 (EJM5) [MIM:611136]. A subtype of idiopathic generalized epilepsy. Patients have afebrile seizures only, with onset in adolescence (rather than in childhood) and myoclonic jerks which usually occur after awakening and are triggered by sleep deprivation and fatigue.

Sequence similarities

Belongs to the ligand-gated ion channel (TC 1.A.9) family. Gamma-aminobutyric acid receptor (TC 1.A.9.5) subfamily. GABRA1 sub-subfamily.

Cellular localization


Images

Anti-GABA A Receptor alpha 1 antibody (ab33299) at 1/10000 dilution + rat brain microsomal preparation tissue lysate at 10 µg

**Predicted band size:** 52 kDa

**Observed band size:** 51 kDa

*why is the actual band size different from the predicted?*

Proteins were visualized using an IgG (HRP) donkey anti-rabbit and a chemiluminescence detection system.
Immunohistochemistry analysis of formalin fixed paraffin embedded rat hippocampus tissue prepared using heat-induced epitope retrieval (HIER) labeling GABA A Receptor alpha 1 using ab33299 at 1/500 dilution. Secondary antibody was an anti-rabbit antibody and HRP-DAB.

Immunoprecipitation analysis: 1 mg of RIPA lysate of rat brain microsomes was immunoprecipitated with 5 μL of ab33299. Arrow indicates GABAA Receptor α1 (~50kD).

ab33299 staining GABA A Receptor alpha 1 in human retinal tissue by Immunohistochemistry (Frozen sections). Tissue was fixed with 4% paraformaldehyde, blocked with 10% donkey serum for 20 minutes at 24°C, then incubated with ab33299 at a 1/100 dilution for 16 hours at 4°C. The secondary antibody used was an Alexa-Fluor 488 (green) conjugated donkey anti-rabbit polyclonal, used at a 1/1000 dilution. Counterstained with Hoechst 33258 (blue).

IPL - inner plexiform layer
INL - inner nuclear layer
OPL - outer plexiform layer
ONL - outer nuclear layer
INS - inner nuclear segments

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