

GABRA4 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12665c

Specification

GABRA4 Antibody (Center) - Product Information

Application	FC, WB,E
Primary Accession	P48169
Other Accession	NP_000800.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	61623
Antigen Region	333-361

GABRA4 Antibody (Center) - Additional Information

Gene ID 2557

Other Names

Gamma-aminobutyric acid receptor subunit alpha-4, GABA(A) receptor subunit alpha-4, GABRA4

Target/Specificity

This GABRA4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 333-361 amino acids from the Central region of human GABRA4.

Dilution

FC~~1:10~50

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

GABRA4 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

GABRA4 Antibody (Center) - Protein Information

Name GABRA4 ([HGNC:4078](#))

Function Alpha subunit of the heteropentameric ligand-gated chloride channel gated by gamma-aminobutyric acid (GABA), a major inhibitory neurotransmitter in the brain (PubMed:[35355020](#)). GABA-gated chloride channels, also named GABA(A) receptors (GABAAR), consist of five subunits arranged around a central pore and contain GABA active binding site(s) located at the alpha and beta subunit interface(s) (PubMed:[35355020](#)). When activated by GABA, GABAARs selectively allow the flow of chloride anions across the cell membrane down their electrochemical gradient (PubMed:[35355020](#)). GABAARs containing alpha-4 are predominantly extrasynaptic, contributing to tonic inhibition in dentate granule cells and thalamic relay neurons (By similarity). Extrasynaptic alpha-4-containing GABAARs control levels of excitability and network activity (By similarity). GABAAR containing alpha-4-beta-3- delta subunits can simultaneously bind GABA and histamine where histamine binds at the interface of two neighboring beta subunits, which may be involved in the regulation of sleep and wakefulness (PubMed:[35355020](#)).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:Q9D6F4}; Multi-pass membrane protein {ECO:0000269|PubMed:35355020, ECO:0007744|PDB:7QN5}. Postsynaptic cell membrane; Multi-pass membrane protein {ECO:0000269|PubMed:35355020, ECO:0007744|PDB:7QN5}

Tissue Location

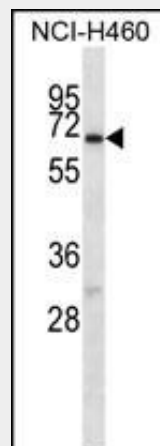
Expressed in the brain. {ECO:0000250|UniProtKB:Q9D6F4}

GABRA4 Antibody (Center) - Protocols

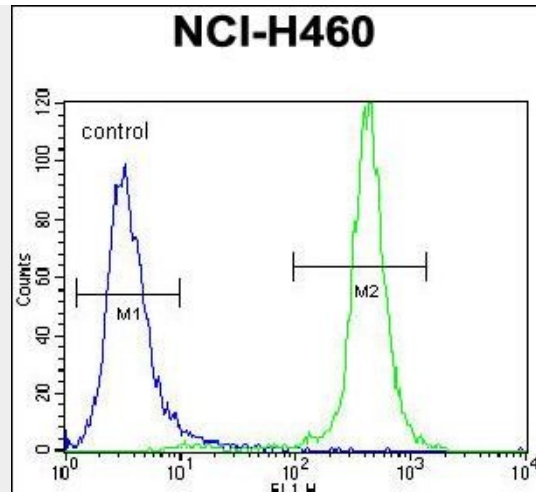
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GABRA4 Antibody (Center) - Images



GABRA4 Antibody (Center) (Cat. #AP12665c) western blot analysis in NCI-H460 cell line lysates (35ug/lane). This demonstrates the GABRA4 antibody detected the GABRA4 protein (arrow).



GABRA4 Antibody (Center) (Cat. #AP12665c) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

GABRA4 Antibody (Center) - Background

GABA is the major inhibitory neurotransmitter in the mammalian brain where it acts at GABA-A receptors, which are ligand-gated chloride channels. Chloride conductance of these channels can be modulated by agents such as benzodiazepines that bind to the GABA-A receptor. At least 16 distinct subunits of GABA-A receptors have been identified.

GABRA4 Antibody (Center) - References

- Bailey, S.D., et al. Diabetes Care (2010) In press :
- Ruano, G., et al. Pharmacogenomics 11(7):959-971(2010)
- Pinheiro, A.P., et al. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B (5), 1070-1080 (2010) :
- Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)
- Tabakoff, B., et al. BMC Biol. 7, 70 (2009) :