

**Goat Anti-GABRA4 Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF1456a

## Specification

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### Goat Anti-GABRA4 Antibody - Product Information

Application	IHC, WB
Primary Accession	<a href="#">P48169</a>
Other Accession	<a href="#">NP_000800</a> , <a href="#">2557</a>
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	61623

### Goat Anti-GABRA4 Antibody - Additional Information

**Gene ID** 2557

#### Other Names

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

#### Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

Goat Anti-GABRA4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### Goat Anti-GABRA4 Antibody - 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:<a href="http://www.uniprot.org/citations/35355020" target="\_blank">35355020</a>). 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:<a href="http://www.uniprot.org/citations/35355020" target="\_blank">35355020</a>). When activated by GABA, GABAARs selectively allow the flow of

chloride anions across the cell membrane down their electrochemical gradient (PubMed:<a href="http://www.uniprot.org/citations/35355020" target="\_blank">35355020</a>). 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:<a href="http://www.uniprot.org/citations/35355020" target="\_blank">35355020</a>).

#### 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

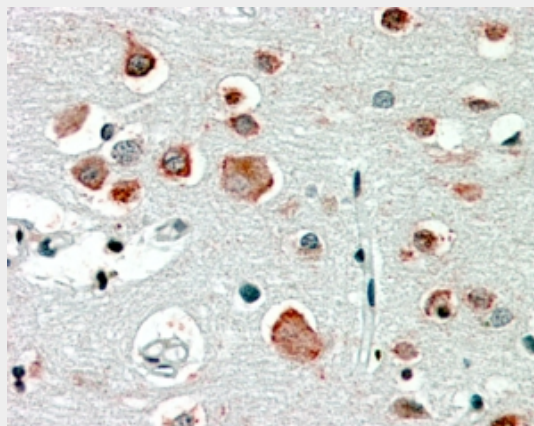
Expressed in the brain. {ECO:0000250|UniProtKB:Q9D6F4}

### Goat Anti-GABRA4 Antibody - Protocols

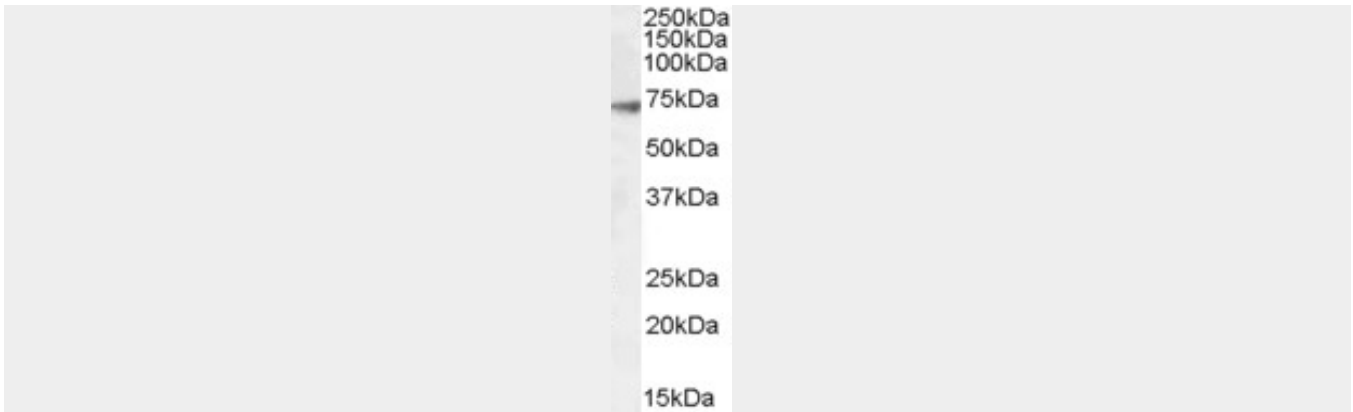
Provided below are standard protocols that you may find useful for product applications.

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

### Goat Anti-GABRA4 Antibody - Images



AF1456a (2.5 µg/ml) staining of paraffin embedded Human Cortex. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



AF1456a (0.1 µg/ml) staining of Human Frontal Cortex lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

### **Goat Anti-GABRA4 Antibody - 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.

### **Goat Anti-GABRA4 Antibody - References**

- Variation at the NFATC2 Locus Increases the Risk of Thiazolinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. *Diabetes Care*, 2010 Jul 13. PMID 20628086.
- Physiogenomic analysis of statin-treated patients: domain-specific counter effects within the ACACB gene on low-density lipoprotein cholesterol? Ruaño G, et al. *Pharmacogenomics*, 2010 Jul. PMID 20602615.
- Association study of 182 candidate genes in anorexia nervosa. Pinheiro AP, et al. *Am J Med Genet B Neuropsychiatr Genet*, 2010 Jul. PMID 20468064.
- Gene-centric association signals for lipids and apolipoproteins identified via the HumanCVD BeadChip. Talmud PJ, et al. *Am J Hum Genet*, 2009 Nov. PMID 19913121.
- Genetical genomic determinants of alcohol consumption in rats and humans. Tabakoff B, et al. *BMC Biol*, 2009 Oct 27. PMID 19874574.