

GABBR1 / GABA B Receptor 1 Antibody (N-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS10817**Specification****GABBR1 / GABA B Receptor 1 Antibody (N-Terminus) - Product Information**

Application	IHC
Primary Accession	Q9UBS5
Reactivity	Human, Mouse, Rabbit, Hamster, Monkey, Pig, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	108kDa KDa

GABBR1 / GABA B Receptor 1 Antibody (N-Terminus) - Additional Information**Gene ID** 2550**Other Names**

Gamma-aminobutyric acid type B receptor subunit 1, GABA-B receptor 1, GABA-B-R1, GABA-BR1, GABABR1, Gb1, GABBR1, GPRC3A

Target/Specificity

Human GABBR1. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage

Long term: -70°C; Short term: +4°C

Precautions

GABBR1 / GABA B Receptor 1 Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

GABBR1 / GABA B Receptor 1 Antibody (N-Terminus) - Protein Information**Name** GABBR1**Synonyms** GPRC3A**Function**

Component of a heterodimeric G-protein coupled receptor for GABA, formed by GABBR1 and GABBR2 (PubMed:<[a href="http://www.uniprot.org/citations/9872316"](http://www.uniprot.org/citations/9872316)>9872316, PubMed:<[a href="http://www.uniprot.org/citations/9872744"](http://www.uniprot.org/citations/9872744)>9872744, PubMed:<[a href="http://www.uniprot.org/citations/15617512"](http://www.uniprot.org/citations/15617512)>15617512, PubMed:<[a href="http://www.uniprot.org/citations/18165688"](http://www.uniprot.org/citations/18165688)>18165688, PubMed:<[a href="http://www.uniprot.org/citations/22660477"](http://www.uniprot.org/citations/22660477)>22660477, PubMed:<[a href="http://www.uniprot.org/citations/24305054"](http://www.uniprot.org/citations/24305054)>24305054). Within the heterodimeric GABA receptor, only GABBR1 seems

to bind agonists, while GABBR2 mediates coupling to G proteins (PubMed:18165688). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors, such as adenylate cyclase (PubMed:10906333, PubMed:10773016, PubMed:10075644, PubMed:9872744, PubMed:24305054). Signaling inhibits adenylate cyclase, stimulates phospholipase A2, activates potassium channels, inactivates voltage-dependent calcium-channels and modulates inositol phospholipid hydrolysis (PubMed:10075644). Calcium is required for high affinity binding to GABA (By similarity). Plays a critical role in the fine-tuning of inhibitory synaptic transmission (PubMed:9844003). Pre-synaptic GABA receptor inhibits neurotransmitter release by down-regulating high-voltage activated calcium channels, whereas postsynaptic GABA receptor decreases neuronal excitability by activating a prominent inwardly rectifying potassium (Kir) conductance that underlies the late inhibitory postsynaptic potentials (PubMed:9844003, PubMed:9872316, PubMed:10075644, PubMed:9872744, PubMed:22660477). Not only implicated in synaptic inhibition but also in hippocampal long-term potentiation, slow wave sleep, muscle relaxation and antinociception (Probable). Activated by (-)-baclofen, cgp27492 and blocked by phaclofen (PubMed:9844003, PubMed:9872316, PubMed:24305054).

Cellular Location

Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q9Z0U4}; Multi-pass membrane protein. Cell projection, dendrite {ECO:0000250|UniProtKB:Q9Z0U4}. Note=Colocalizes with ATF4 in hippocampal neuron dendritic membranes (By similarity). Coexpression of GABBR1 and GABBR2 is required for GABBR1 maturation and transport to the plasma membrane (PubMed:15617512). {ECO:0000250|UniProtKB:Q9Z0U4, ECO:0000269|PubMed:15617512}

Tissue Location

Highly expressed in brain (PubMed:9844003, PubMed:9753614, PubMed:9872744). Weakly expressed in heart, small intestine and uterus. Isoform 1A: Mainly expressed in granular cell and molecular layer (PubMed:9844003). Isoform 1B: Mainly expressed in Purkinje cells (PubMed:9844003). Isoform 1E: Predominantly expressed in peripheral tissues as kidney, lung, trachea, colon, small intestine, stomach, bone marrow, thymus and mammary gland (PubMed:10906333)

Volume

50 µl

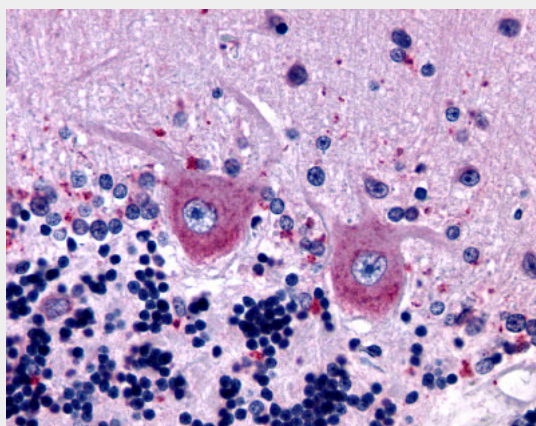
GABBR1 / GABA B Receptor 1 Antibody (N-Terminus) - Protocols

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

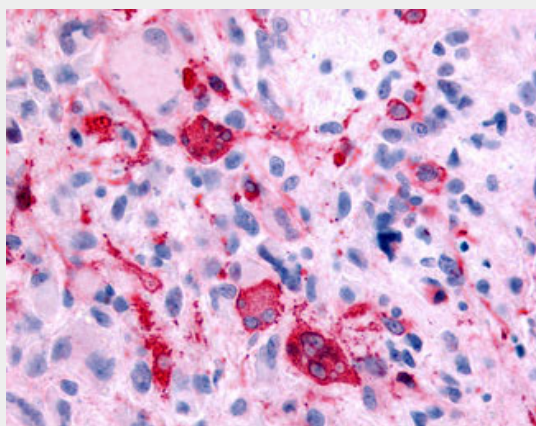
- [Western Blot](#)
- [Blocking Peptides](#)

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

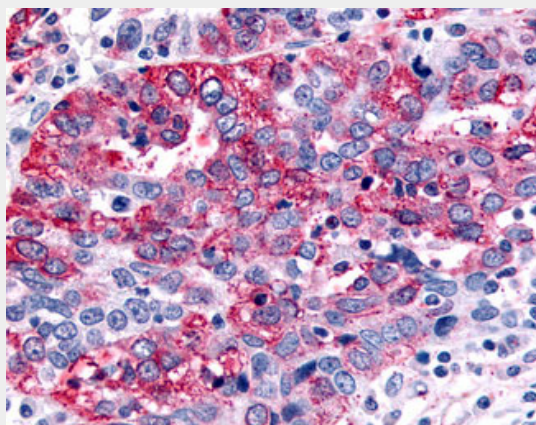
GABBR1 / GABA B Receptor 1 Antibody (N-Terminus) - Images



Anti-GABBR1 antibody ALS10817 IHC of human brain, Purkinje neurons.



Anti-GABBR1 / GABBR1 antibody IHC of human Brain, Glioblastoma.



Anti-GABBR1 / GABBR1 antibody IHC of human Ovary, Carcinoma.

GABBR1 / GABA B Receptor 1 Antibody (N-Terminus) - Background

Component of a heterodimeric G-protein coupled receptor for GABA, formed by GABBR1 and GABBR2. Within the heterodimeric GABA receptor, only GABBR1 seems to bind agonists, while GABBR2 mediates coupling to G proteins. Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors, such as adenylate cyclase. Signaling inhibits adenylate cyclase, stimulates phospholipase A2, activates potassium channels, inactivates voltage-dependent calcium-channels and modulates inositol phospholipid hydrolysis. Calcium is required for high affinity binding to GABA. Plays a critical role in the fine-tuning of inhibitory synaptic transmission. Pre-synaptic GABA receptor inhibits neurotransmitter release by down-regulating high-voltage activated calcium channels, whereas postsynaptic GABA receptor decreases neuronal excitability by activating a prominent inwardly rectifying potassium (Kir) conductance that underlies the late inhibitory postsynaptic potentials. Not only implicated in synaptic inhibition but also in hippocampal long-term potentiation, slow wave sleep, muscle relaxation and antinociception. Activated by (-)-baclofen, cgp27492 and blocked by phaclofen.

GABBR1 / GABA B Receptor 1 Antibody (N-Terminus) - References

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White J.H.,et al.Nature 396:679-682(1998).
Stropp U.,et al.Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases.
Grifa A.,et al.Biochem. Biophys. Res. Commun. 250:240-245(1998).
Goei V.L.,et al.Biol. Psychiatry 44:659-666(1998).