

GABBR1 Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP11234c**Specification**

GABBR1 Antibody (Center) Blocking peptide - Product InformationPrimary Accession [Q9UBS5](#)**GABBR1 Antibody (Center) Blocking peptide - 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

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GABBR1 Antibody (Center) Blocking peptide - Protein Information**Name** GABBR1**Synonyms** GPRC3A**Function**

Component of a heterodimeric G-protein coupled receptor for GABA, formed by GABBR1 and GABBR2 (PubMed: [9872316](http://www.uniprot.org/citations/9872316), PubMed: [9872744](http://www.uniprot.org/citations/9872744), PubMed: [15617512](http://www.uniprot.org/citations/15617512), PubMed: [18165688](http://www.uniprot.org/citations/18165688), PubMed: [22660477](http://www.uniprot.org/citations/22660477), PubMed: [24305054](http://www.uniprot.org/citations/24305054)). Within the heterodimeric GABA receptor, only GABBR1 seems to bind agonists, while GABBR2 mediates coupling to G proteins (PubMed: [18165688](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/10906333), PubMed: [10773016](http://www.uniprot.org/citations/10773016), PubMed: [10075644](http://www.uniprot.org/citations/10075644)).

target="_blank">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)

GABBR1 Antibody (Center) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

GABBR1 Antibody (Center) Blocking peptide - Images

GABBR1 Antibody (Center) Blocking peptide - Background

Gamma-aminobutyric acid (GABA) is the main inhibitory neurotransmitter in the mammalian central nervous system. GABA exerts its effects through ionotropic [GABA(A/C)] receptors, to produce fast synaptic inhibition, and metabotropic [GABA(B)] receptors, to produce slow, prolonged inhibitory signals. The GABA(B) receptor consists of a heterodimer of two related 7-transmembrane receptors, GABA(B) receptor 1 and GABA(B) receptor 2. The GABA(B) receptor 1 gene is mapped to chromosome 6p21.3 within the HLA class I region close to the HLA-F gene. Susceptibility loci for multiple sclerosis, epilepsy, and schizophrenia have also been mapped in this region.

Alternative splicing of this gene generates multiple transcript variants.

GABBR1 Antibody (Center) Blocking peptide - References

Cramer, N.P., et al. Adv. Pharmacol. 58, 397-426 (2010) :Gonzalez-Burgos, G. Adv. Pharmacol. 58, 175-204 (2010) :Tabata, T., et al. Adv. Pharmacol. 58, 149-173 (2010) :Padgett, C.L., et al. Adv. Pharmacol. 58, 123-147 (2010) :Terunuma, M., et al. Adv. Pharmacol. 58, 113-122 (2010) :