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GABBR1 Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP11234c

Specification

GABBR1 Antibody (Center) Blocking peptide - Product Information

Primary Accession O9UBS5

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, PubMed:<a href="http://www.uniprot.org/ci

GABBR1 Antibody (Center) Blocking peptide - Background

Gamma-aminobutyric acid (GABA) is the main inhibitoryneurotransmitter in the mammalian central nervous system. GABAexerts its effects through ionotropic [GABA(A/C)] receptors, toproduce fast synaptic inhibition, and metabotropic [GABA(B)]receptors, to produce slow, prolonged inhibitory signals. TheGABA(B) receptor consists of a heterodimer of two related7-transmembrane receptors, GABA(B) receptor 1 and GABA(B) receptor2. The GABA(B) receptor 1 gene is mapped to chromosome 6p21.3within the HLA class I region close to the HLA-F gene.Susceptibility loci for multiple sclerosis, epilepsy, andschizophrenia have also been mapped in this region. Alternativesplicing 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) :

tations/9872744"
target="_blank">9872744,
PubMed:<a href="http://www.uniprot.org/ci
tations/15617512"
target="_blank">15617512,
PubMed:<a href="http://www.uniprot.org/ci
tations/18165688"
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PubMed:<a href="http://www.uniprot.org/ci
tations/22660477"
target="_blank">22660477,
PubMed:<a href="http://www.uniprot.org/ci
tations/24305054"
target="_blank">24305054). Within the heterodimeric GABA receptor, only GABBR1 seems to bind agonists, while GABBR2 mediates coupling to G proteins (PubMed:<a href="http://www.uniprot.org/c
itations/18165688"
target="_blank">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:<a href="http://www.uniprot.org/c
itations/10906333"
target="_blank">10906333,
PubMed:<a href="http://www.uniprot.org/ci
tations/10773016"
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PubMed:<a href="http://www.uniprot.org/ci
tations/10075644"
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tations/9872744"
target="_blank">9872744,
PubMed:<a href="http://www.uniprot.org/ci
tations/24305054"
target="_blank">24305054). Signaling inhibits adenylate cyclase, stimulates phospholipase A2, activates potassium channels, inactivates voltage-dependent calcium-channels and modulates inositol phospholipid hydrolysis (PubMed:<a href="
http://www.uniprot.org/citations/10075644"
target="_blank">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:<a href="http://www
.uniprot.org/citations/9844003"
target="_blank">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. Cell junction, synapse, 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