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GABBR1 Blocking Peptide (N-Term)

Synthetic peptide
Catalog # BP21792a

Specification

GABBR1 Blocking Peptide (N-Term) - Product Information

Primary Accession	Q9UBS5
Other Accession	Q9WV18, Q9Z0U4

GABBR1 Blocking Peptide (N-Term) - 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
The synthetic peptide sequence is selected from aa 38-52 of HUMAN GABBR1

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 Blocking Peptide (N-Term) - Protein Information

Name GABBR1

Synonyms GPRC3A

Function
Component of a heterodimeric G-protein

GABBR1 Blocking Peptide (N-Term) - 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 Blocking Peptide (N-Term) - References

Kaupmann K.,et al.Proc. Natl. Acad. Sci. U.S.A. 95:14991-14996(1998).
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).

coupled receptor for GABA, formed by GABBR1 and GABBR2 (PubMed:9872316, PubMed:9872744, PubMed:15617512, PubMed:18165688, PubMed:22660477, PubMed: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:<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 Blocking Peptide (N-Term) - Protocols

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

- Blocking Peptides