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Datasheet for ABIN3118847
GABBR1 Protein (AA 15-961) (rho-1D4 tag)

Overview

Quantity:	1 mg
Target:	GABBR1
Protein Characteristics:	AA 15-961
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This GABBR1 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: PGAGGAQTPN ATSEGCQIIH PPWEGGIRYR GLTRDQVKAI NFLPVDYEIE YVCRGEREVV
GPKVRKCLAN GSWTDMDTPS RCVRICSFSY LTLENGKVFL TGGDLPALDG ARVDFRCDDP
FHLVGSSRSI CSQGQWSTPK PHCQVNRTPH SERRAVYIGA LFPMSGGWPG GQACQPAVEM
ALEDVNSRRD ILPDYELKLI HHDSKCDPGQ ATKYLYELLY NDPKIILMP GCSSVSTLVA
EAARMWNLIV LSYGSSSPAL SNRQRFPTFF RTHPSATLHN PTRVKLFEKW GWKKIATIQQ
TTEVFTSTLD DLEERVKEAG IEITFRQSFF SDPAVPVKNL KRQDARIIVG LFYETEARKV
FCEVYKERLF GKYYVWFLIG WYADNWFKIY DPSINCTVDE MTEAVEGHIT TEIVMLNPAN
TRSISNMTSQ EFVEKLTKRL KRHPREETGGF QEAPLAYDAI WALALALNKT SGGGGRSGVR
LEDFNYYNQT ITDQIYRAMN SSSFEGVSGH VVFDASGSRM AWTLIEQLQG GSYKKIGYYD
STKDDLWSK TDKWIGGSPP ADQTLVIKTF RFLSQKLFIS VSVLSSLGIV LAVVCLSFNI
YNSHVRYIQN SQPNLNNLTA VGCSLALAAV FPLGLDGYHI GRNQFPFVCQ ARLWLLGLGF
SLGYGSMFTK IWWWHTVFTK KEEKKEWRKT LEPWKLYATV GLLVGMVDVLT LAIWQIVDPL

HRTIETFAKE EPKEDIDVSI LPQLEHCSSR KMNTWLGIFY GYKGLLLLLL IFLAYETKSV
STEKINDHRA VGMAIYNVAV LCLITAPVTM ILSSQQDAAF AFASLAIVFS SYITLVVLFV
PKMRRLLITRG EWQSEAQDTM KTGSSSTNNNE EEKSRLLLEKE NRELEKIIAE KEERVSELRH
QLQSRQQLRS RRHPPTPEP SGGLPRGPPE PPDRLSCDGS RVHLLYK

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human GABBR1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and

Product Details

Western blot.

Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin-free.
Grade:	Crystallography grade

Target Details

Target:	GABBR1
Alternative Name:	GABBR1 (GABBR1 Products)
Background:	<p>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., Isoform 1E may regulate the formation of functional GABBR1/GABBR2 heterodimers by competing for GABBR2 binding. This could explain the observation that certain small molecule ligands exhibit differential affinity for central versus peripheral sites.</p>
Molecular Weight:	107.9 kDa Including tag.
UniProt:	Q9UBS5
Pathways:	Positive Regulation of Peptide Hormone Secretion , cAMP Metabolic Process

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)
