Datasheet for ABIN3088714

AGRN Protein (AA 30-1102) (His tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	AGRN
Protein Characteristics:	AA 30-1102
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This AGRN protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence:	TCPERALERR EEEANVVLTG TVEEILNVDP VQHTYSCKVR VWRYLKGKDL VARESLLDGG NKVVISGFGD PLICDNQVST GDTRIFFVNP APPYLWPAHK NELMLNSSLM RITLRNLEEV EFCVEDKPGT HFTPVPPTPP DACRGMLCGF GAVCEPNAEG PGRASCVCKK SPCPSVVAPV CGSDASTYSN ECELQRAQCS QQRRIRLLSR GPCGSRDPCS NVTCSFGSTC ARSADGLTAS CLCPATCRGA PEGTVCGSDG ADYPGECQLL RRACARQENV FKKFDGPCDP CQGALPDPSR SCRVNPRTRR PEMLLRPESC PARQAPVCGD DGVTYENDCV MGRSGAARGL LLQKVRSGQC QGRDQCPEPC RFNAVCLSRR GRPRCSCDRV TCDGAYRPVC AQDGRTYDSD CWRQQAECRQ QRAIPSKHQG PCDQAPSPCL GVQCAFGATC AVKNGQAACE CLQACSSLYD PVCGSDGVTY GSACELEATA CTLGREIQVA RKGPCDRCGQ CRFGALCEAE TGRCVCPSEC VALAQPVCGS DGHTYPSECM LHVHACTHQI SLHVASAGPC ETCGDAVCAF GAVCSAGQCV CPRCEHPPPG PVCGSDGVTY GSACELREAA CLQQTQIEEA RAGPCEQAEC GSGGSGSGED GDCEQELCRQ RGGIWDEDSE DGPCVCDFSC QSVPGSPVCG SDGVTYSTEC ELKKARCESQ RGLYVAAQGA

	CRGPTFAPLP PVAPLHCAQT PYGCCQDNIT AARGVGLAGC PSACQCNPHG SYGGTCDPAT GQCSCRPGVG GLRCDRCEPG FWNFRGIVTD GRSGCTPCSC DPQGAVRDDC EQMTGLCSCK PGVAGPKCGQ CPDGRALGPA GCEADASAPA TCAEMRCEFG ARCVEESGSA HCVCPMLTCP EANATKVCGS DGVTYGNECQ LKTIACRQGL QISIQSLGPC QEAVAPSTHP TSASVTVTTP GLLLSQALPA PPGALPLAPS STAHSQTTPP PSSRPRTTAS VPRTTVWPVL TVPPTAPSPA PSLVASAFGE SGSTDGSSDE ELSGDQEASG GGSGGLEPLE GSSVATPGPP VER **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 AGRN 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 receival 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:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Product Details

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:	AGRN
Alternative Name:	AGRN (AGRN Products)
Background:	Isoform 1: heparan sulfate basal lamina glycoprotein that plays a central role in the formation and the maintenance of the neuromuscular junction (NMJ) and directs key events in postsynaptic differentiation. Component of the AGRN-LRP4 receptor complex that induces the phosphorylation and activation of MUSK. The activation of MUSK in myotubes induces the formation of NMJ by regulating different processes including the transcription of specific genes and the clustering of AChR in the postsynaptic membrane. Calcium ions are required for maximal AChR clustering. AGRN function in neurons is highly regulated by alternative splicing, glycan binding and proteolytic processing. Modulates calcium ion homeostasis in neurons, specifically by inducing an increase in cytoplasmic calcium ions. Functions differentially in the central nervous system (CNS) by inhibiting the alpha(3)-subtype of Na+/K+-ATPase and evoking depolarization at CNS synapses. This secreted isoform forms a bridge, after release from motor neurons, to basal lamina through binding laminin via the NtA domain., Isoform 2: transmembrane form that is the predominate form in neurons of the brain, induces dendritic filopodia and synapse formation in mature hippocampal neurons in large part due to the attached glycosaminoglycan chains and the action of Rho-family GTPases., Isoform 1, isoform 4 and isoform 5: neuron-specific (z+) isoforms that contain C-terminal insertions of 8-19 AA are potent activators of AChR clustering. Isoform 5, agrin (z+8), containing the 8-AA insert, forms a receptor complex in myotubules containing the neuronal AGRN, the muscle-specific kinase MUSK and LRP4, a member of the LDL receptor family. The splicing factors, NOVA1 and NOVA2, regulate AGRN splicing and production of the 'z' isoforms., Isoform 3 and isoform 6: lack any 'z' insert, are muscle-specific and may be involved in endothelial cell differentiation., Agrin N-terminal 110 kDa subunit: is involved in regulation of neurite outgrowth probably due to the presence of the glycosaminoglcan (GAG) side chains of heparan and chondroitin sulfate attached to the Ser/Thr- and Gly/Ser-rich regions. Also involved in modulation of growth factor signaling (By similarity). {ECO:0000250, ECO:0000269|PubMed:19631309,

Target Details

	ECO:0000269|PubMed:21969364}., Agrin C-terminal 22 kDa fragment: this released fragment is important for agrin signaling and to exert a maximal dendritic filopodia-inducing effect. All 'z' splice variants (z+) of this fragment also show an increase in the number of filopodia.
Molecular Weight:	112.8 kDa Including tag.
UniProt:	O00468
Pathways:	Glycosaminoglycan Metabolic Process, Regulation of Muscle Cell Differentiation, Skeletal Muscle Fiber Development

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)

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process