Datasheet for ABIN3114968

ERBB4 Protein (AA 26-1308) (rho-1D4 tag)

1 Image

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Overview

Quantity:	1 mg
Target:	ERBB4
Protein Characteristics:	AA 26-1308
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ERBB4 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	QSVCAGTENK LSSLSDLEQQ YRALRKYYEN CEVVMGNLEI TSIEHNRDLS FLRSVREVTG YVLVALNQFR YLPLENLRII RGTKLYEDRY ALAIFLNYRK DGNFGLQELG LKNLTEILNG GVYVDQNKFL CYADTIHWQD IVRNPWPSNL TLVSTNGSSG CGRCHKSCTG RCWGPTENHC QTLTRTVCAE QCDGRCYGPY VSDCCHRECA GGCSGPKDTD CFACMNFNDS GACVTQCPQT FVYNPTTFQL EHNFNAKYTY GAFCVKKCPH NFVVDSSSCV RACPSSKMEV EENGIKMCKP CTDICPKACD GIGTGSLMSA QTVDSSNIDK FINCTKINGN LIFLVTGIHG DPYNAIEAID PEKLNVFRTV REITGFLNIQ SWPPNMTDFS VFSNLVTIGG RVLYSGLSLL ILKQQGITSL QFQSLKEISA GNIYITDNSN LCYYHTINWT TLFSTINQRI VIRDNRKAEN CTAEGMVCNH LCSSDGCWGP GPDQCLSCRR FSRGRICIES CNLYDGEFRE FENGSICVEC DPQCEKMEDG LLTCHGPGPD NCTKCSHFKD GPNCVEKCPD GLQGANSFIF KYADPDRECH PCHPNCTQGC NGPTSHDCIY YPWTGHSTLP QHARTPLIAA GVIGGLFILV IVGLTFAVYV RRKSIKKKRA LRRFLETELV EPLTPSGTAP NQAQLRILKE TELKRVKVLG SGAFGTVYKG IWVPEGETVK

	IPVAIKILNE TTGPKANVEF MDEALIMASM DHPHLVRLLG VCLSPTIQLV TQLMPHGCLL EYVHEHKDNI GSQLLLNWCV QIAKGMMYLE ERRLVHRDLA ARNVLVKSPN HVKITDFGLA RLLEGDEKEY NADGGKMPIK WMALECIHYR KFTHQSDVWS YGVTIWELMT FGGKPYDGIP TREIPDLLEK GERLPQPPIC TIDVYMVMVK CWMIDADSRP KFKELAAEFS RMARDPQRYL VIQGDDRMKL PSPNDSKFFQ NLLDEEDLED MMDAEEYLVP QAFNIPPPIY TSRARIDSNR SEIGHSPPPA YTPMSGNQFV YRDGGFAAEQ GVSVPYRAPT STIPEAPVAQ GATAEIFDDS CCNGTLRKPV APHVQEDSST QRYSADPTVF APERSPRGEL DEEGYMTPMR DKPKQEYLNP VEENPFVSRR KNGDLQALDN PEYHNASNGP PKAEDEYVNE PLYLNTFANT LGKAEYLKNN ILSMPEKAKK AFDNPDYWNH SLPPRSTLQH PDYLQEYSTK YFYKQNGRIR PIVAENPEYL SEFSLKPGTV LPPPPYRHRN TVV **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 ERBB4 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:	Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

Product Details

	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 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:	ERBB4
Alternative Name:	ERBB4 (ERBB4 Products)
Background:	Tyrosine-protein kinase that plays an essential role as cell surface receptor for neuregulins and EGF family members and regulates development of the heart, the central nervous system and the mammary gland, gene transcription, cell proliferation, differentiation, migration and apoptosis. Required for normal cardiac muscle differentiation during embryonic development, and for postnatal cardiomyocyte proliferation. Required for normal development of the embryonic central nervous system, especially for normal neural crest cell migration and normal axon guidance. Required for mammary gland differentiation, induction of milk proteins and lactation. Acts as cell-surface receptor for the neuregulins NRG1, NRG2, NRG3 and NRG4 and the EGF family members BTC, EREG and HBEGF. Ligand binding triggers receptor dimerization and autophosphorylation at specific tyrosine residues that then serve as binding sites for scaffold proteins and effectors. Ligand specificity and signaling is modulated by alternative splicing, proteolytic processing, and by the formation of heterodimers with other ERBB family members, thereby creating multiple combinations of intracellular phosphotyrosines that trigger ligand- and context-specific cellular responses. Mediates phosphorylation of SHC1 and activation of the MAP kinases MAPK1/ERK2 and MAPK3/ERK1. Isoform JM-A CYT-1 and isoform JM-B CYT-1 phosphorylate PIK3R1, leading to the activation of phosphatidylinositol 3-kinase and AKT1 and protect cells against apoptosis. Isoform JM-A CYT-1 and isoform JM-B CYT-1 mediate reorganization of the actin cytoskeleton and promote cell migration in response

Target Details

	to NRG1. Isoform JM-A CYT-2 and isoform JM-B CYT-2 lack the phosphotyrosine that mediates interaction with PIK3R1, and hence do not phosphorylate PIK3R1, do not protect cells against apoptosis, and do not promote reorganization of the actin cytoskeleton and cell migration. Proteolytic processing of isoform JM-A CYT-1 and isoform JM-A CYT-2 gives rise to the corresponding soluble intracellular domains (4ICD) that translocate to the nucleus, promote nuclear import of STAT5A, activation of STAT5A, mammary epithelium differentiation, cell proliferation and activation of gene expression. The ERBB4 soluble intracellular domains (4ICD) colocalize with STAT5A at the CSN2 promoter to regulate transcription of milk proteins during lactation. The ERBB4 soluble intracellular domains can also translocate to mitochondria and promote apoptosis. {ECO:0000269|PubMed:10348342, ECO:0000269|PubMed:10353604, ECO:0000269|PubMed:10358079, ECO:0000269|PubMed:10722704, ECO:0000269|PubMed:10867024, ECO:0000269|PubMed:11178955, ECO:0000269|PubMed:11390655, ECO:0000269|PubMed:12807903, ECO:0000269|PubMed:15534001, ECO:0000269|PubMed:15746097, ECO:0000269|PubMed:16251361, ECO:0000269|PubMed:16778220, ECO:0000269|PubMed:16837552, ECO:0000269|PubMed:17486069, ECO:0000269|PubMed:17638867, ECO:0000269|PubMed:19098003, ECO:0000269|PubMed:20858735, ECO:0000269|PubMed:8383326, ECO:0000269|PubMed:8617750, ECO:0000269|PubMed:9135143, ECO:0000269|PubMed:9168115, ECO:0000269|PubMed:9334263}.
Molecular Weight:	145.4 kDa Including tag.
UniProt:	Q15303
Pathways:	RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway

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 gurantee 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)

Images

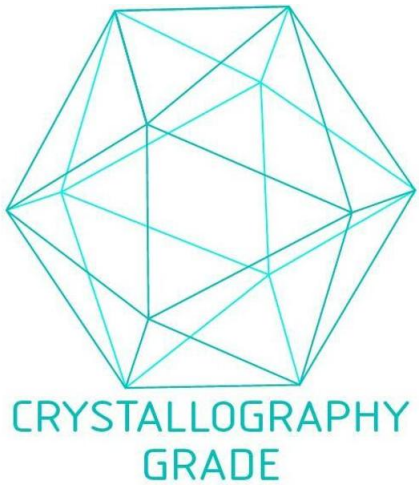

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process