Datasheet for ABIN3117815

LGR4 Protein (AA 25-951) (rho-1D4 tag)

1 Image

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Overview

Quantity:	1 mg
Target:	LGR4
Protein Characteristics:	AA 25-951
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This LGR4 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	APPLCAAPCS CDGDRRVDCS GKGLTAVPEG LSAFTQALDI SMNNITQLPE DAFKNFPFLE ELQLAGNDLS FIHPKALSGL KELKVLTLQN NQLKTVPSEA IRGLSALQSL RLDANHITSV PEDSFEGLVQ LRHLWLDDNS LTEVPVHPLS NLPTLQALTL ALNKISSIPD FAFTNLSSLV VLHLHNNKIR SLSQHCFDGL DNLETLDLNY NNLGEFPQAI KALPSLKELG FHSNSISVIP DGAFDGNPLL RTIHLYDNPL SFVGNSAFHN LSDLHSLVIR GASMVQQFPN LTGTVHLESL TLTGTKISSI PNNLCQEQKM LRTLDLSYNN IRDLPSFNGC HALEEISLQR NQIYQIKEGT FQGLISLRIL DLSRNLIHEI HSRAFATLGP ITNLDVSFNE LTSFPTEGLN GLNQLKLVGN FKLKEALAAK DFVNLRSLSV PYAYQCCAFW GCDSYANLNT EDNSLQDHSV AQEKGTADAA NVTSTLENEE HSQIIIHCTP STGAFKPCEY LLGSWMIRLT VWFIFLVALF FNLLVILTTF ASCTSLPSSK LFIGLISVSN LFMGIYTGIL TFLDAVSWGR FAEFGIWWET GSGCKVAGFL AVFSSESAIF LLMLATVERS LSAKDIMKNG KSNHLKQFRV AALLAFLGAT VAGCFPLFHR GEYSASPLCL PFPTGETPSL GFTVTLVLLN SLAFLLMAVI YTKLYCNLEK EDLSENSQSS

	MIKHVAWLIF TNCIFFCPVA FFSFAPLITA ISISPEIMKS VTLIFFPLPA CLNPVLYVFF NPKFKEDWKL LKRRVTKKSG SVSVSISSQG GCLEQDFYYD CGMYSHLQGN LTVCDCCESF LLTKPVSCKH LIKSHSCPAL AVASCQRPEG YWSDCGTQSA HSDYADEEDS FVSDSSDQVQ ACGRACFYQS RGFPLVRYAY NLPRVKD **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 LGR4 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: 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:	LGR4
Alternative Name:	LGR4 (LGR4 Products)
Background:	Receptor for R-spondins that potentiates the canonical Wnt signaling pathway and is involved in the formation of various organs. Upon binding to R-spondins (RSPO1, RSPO2, RSPO3 or RSPO4), associates with phosphorylated LRP6 and frizzled receptors that are activated by extracellular Wnt receptors, triggering the canonical Wnt signaling pathway to increase expression of target genes. In contrast to classical G-protein coupled receptors, does not activate heterotrimeric G-proteins to transduce the signal. Its function as activator of the Wnt signaling pathway is required for the development of various organs, including liver, kidney, intestine, bone, reproductive tract and eye. May also act as a receptor for norrin (NDP), such results however require additional confirmation in vivo. Required during spermatogenesis to activate the Wnt signaling pathway in peritubular myoid cells. Required for the maintenance of intestinal stem cells and Paneth cell differentiation in postnatal intestinal crypts. Acts as a regulator of bone formation and remodeling. Involved in kidney development, required for maintaining the ureteric bud in an undifferentiated state. Involved in the development of the anterior segment of the eye. Required during erythropoiesis. Also acts as a negative regulator of innate immunity by inhibiting TLR2/TLR4 associated pattern-recognition and proinflammatory cytokine production. Plays an important role in regulating the circadian rhythms of plasma lipids, partially through regulating the rhythmic expression of MTTP (By similarity). {ECO:0000250|UniProtKB:A2ARI4, ECO:0000269|PubMed:21693646, ECO:0000269|PubMed:21727895, ECO:0000269|PubMed:21909076, ECO:0000269|PubMed:22815884, ECO:0000269|PubMed:23444378, ECO:0000269|PubMed:23756652}.
Molecular Weight:	103.5 kDa Including tag.
UniProt:	Q9BXB1

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