Datasheet for ABIN3130812

LGR4 Protein (AA 25-544) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	LGR4
Protein Characteristics:	AA 25-544
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This LGR4 protein is labelled with His 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 LRHLWLDDNI LTEVPVRPLS NLPTLQALTL ALNNISSIPD FAFTNLSSLV VLHLHNNKIK SLSQHCFDGL DNLETLDLNY NNLDEFPQAI KALPSLKELG FHSNSISVIP DGAFAGNPLL RTIHLYDNPL SFVGNSAFHN LSDLHSLVIR GASLVQWFPN LAGTVHLESL TLTGTKISSI PDDLCQNQKM LRTLDLSYND IRDLPSFNGC RALEEISLQR NQISLIKETT FQGLTSLRIL DLSRNLIREI HSGAFAKLGT ITNLDVSFNE LTSFPTEGLN GLNQLKLVGN FQLKDALAAR DFANLRSLSV PYAYQCCAFW GCDSYANLNT EDNSPQDHSV TKEKGATDAA NATSTAESEE HSQIIIHCTP STGAFKPCEY LLGSWMIRLT **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

Product Details

Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Mouse 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:	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.
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 (PubMed:24353284). {ECO:0000269|PubMed:18955481, ECO:0000269|PubMed:19605502, ECO:0000269|PubMed:21508962, ECO:0000269|PubMed:21693646, ECO:0000269|PubMed:21727895, ECO:0000269|PubMed:23393138, ECO:0000269|PubMed:23444378, ECO:0000269|PubMed:23533175, ECO:0000269|PubMed:23589304, ECO:0000269|PubMed:24353284}.
Molecular Weight:	58.0 kDa Including tag.
UniProt:	A2ARI4

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:	Protein has not been tested for activity yet. 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

Application Details

	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

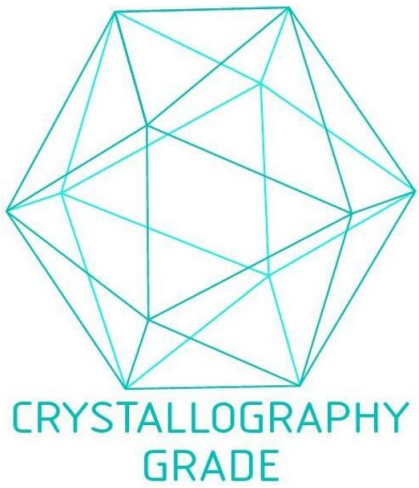

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process