Datasheet for ABIN3134191

Leptin Receptor Protein (LEPR) (AA 22-1162) (rho-1D4 tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	Leptin Receptor (LEPR)
Protein Characteristics:	AA 22-1162
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Leptin Receptor protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	LNLAYPISPW KFKLFCGPPN TTDDSFLSPA GAPNNASALK GASEAIVEAK FNSSGIYVPE LSKTVFHCCF GNEQGQNCSA LTDNTEGKTL ASVVKASVFR QLGVNWDIEC WMKGDLTLFI CHMEPLPKNP FKNYDSKVHL LYDLPEVIDD SPLPPLKDSF QTVQCNCSLR GCECHVPVPR AKLNYALLMY LEITSAGVSF QSPLMSLQPM LVVKPDPPLG LHMEVTDDGN LKISWDSQTM APFPLQYQVK YLENSTIVRE AAEIVSATSL LVDSVLPGSS YEVQVRSKRL DGSGVWSDWS SPQVFTTQDV VYFPPKILTS VGSNASFHCI YKNENQIISS KQIVWWRNLA EKIPEIQYSI VSDRVSKVTF SNLKATRPRG KFTYDAVYCC NEQACHHRYA ELYVIDVNIN ISCETDGYLT KMTCRWSPST IQSLVGSTVQ LRYHRRSLYC PDSPSIHPTS EPKNCVLQRD GFYECVFQPI FLLSGYTMWI RINHSLGSLD SPPTCVLPDS VVKPLPPSNV KAEITVNTGL LKVSWEKPVF PENNLQFQIR YGLSGKEIQW KTHEVFDAKS KSASLLVSDL CAVYVVQVRC RRLDGLGYWS NWSSPAYTLV MDVKVPMRGP EFWRKMDGDV TKKERNVTLL WKPLTKNDSL CSVRRYVVKH RTAHNGTWSE DVGNRTNLTF LWTEPAHTVT VLAVNSLGAS LVNFNLTFSW PMSKVSAVES

	LSAYPLSSSC VILSWTLSPD DYSLLYLVIE WKILNEDDGM KWLRIPSNVK KFYIHDNFIP IEKYQFSLYP VFMEGVGKPK IINGFTKDAI DKQQNDAGLY VIVPIIISSC VLLLGTLLIS HQRMKKLFWD DVPNPKNCSW AQGLNFQKPE TFEHLFTKHA ESVIFGPLLL EPEPISEEIS VDTAWKNKDE MVPAAMVSLL LTTPDPESSS ICISDQCNSA NFSGSQSTQV TCEDECQRQP SVKYATLVSN DKLVETDEEQ GFIHSPVSNC ISSNHSPLRQ SFSSSSWETE AQTFFLLSDQ QPTMISPQLS FSGLDELLEL EGSFPEENHR EKSVCYLGVT SVNRRESGVL LTGEAGILCT FPAQCLFSDI RILQERCSHF VENNLSLGTS GENFVPYMPQ FQTCSTHSHK IMENKMCDLT V **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. • Mouse Lepr 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

Product Details

	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:	Leptin Receptor (LEPR)
Alternative Name:	Lepr (LEPR Products)
Background:	Receptor for hormone LEP/leptin (Probable) (PubMed:11861497). On ligand binding, mediates LEP central and peripheral effects through the activation of different signaling pathways such as JAK2/STAT3 and MAPK cascade/FOS (PubMed:10799542, PubMed:25383904, PubMed:11923481, PubMed:11861497). In the hypothalamus, LEP acts as an appetite-regulating factor that induces a decrease in food intake and an increase in energy consumption by inducing anorexinogenic factors and suppressing orexigenic neuropeptides, also regulates bone mass and secretion of hypothalamo-pituitary-adrenal hormones (PubMed:10660043, PubMed:12594516). In the periphery, increases basal metabolism, influences reproductive function, regulates pancreatic beta-cell function and insulin secretion, is pro-angiogenic and affects innate and adaptive immunity (PubMed:25383904, PubMed:11923481). Control of energy homeostasis and melanocortin production (stimulation of POMC and full repression of AgRP transcription) is mediated by STAT3 signaling, whereas distinct signals regulate NPY and the control of fertility, growth and glucose homeostasis (PubMed:12594516). Involved in the regulation of counter-regulatory response to hypoglycemia by inhibiting neurons of the parabrachial nucleus (PubMed:25383904). Has a specific effect on T lymphocyte responses, differentially regulating the proliferation of naive and memory T-cells. Leptin increases Th1 and suppresses Th2 cytokine production (PubMed:9732873). {ECO:0000269|PubMed:10660043, ECO:0000269|PubMed:10799542, ECO:0000269|PubMed:11861497, ECO:0000269|PubMed:11923481, ECO:0000269|PubMed:12594516, ECO:0000269|PubMed:25383904, ECO:0000269|PubMed:9732873, ECO:0000305|PubMed:25232147}., Isoform A: May transport LEP across the blood-brain

Target Details

	barrier. Binds LEP and mediates LEP endocytosis (PubMed:17620316, PubMed:20223942). Does not induce phosphorylation of and activate STAT3 (PubMed:11923481, PubMed:20223942). {ECO:0000269|PubMed:11923481, ECO:0000269|PubMed:17620316, ECO:0000269|PubMed:20223942}., Isoform E: Antagonizes Isoform A and isoform B-mediated LEP binding and endocytosis. {ECO:0000269|PubMed:17620316}.
Molecular Weight:	129.4 kDa Including tag.
UniProt:	P48356
Pathways:	JAK-STAT Signaling, AMPK Signaling, Feeding Behaviour

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 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)