

Datasheet for ABIN3093528

Leptin Receptor Protein (LEPR) (AA 22-839) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	Leptin Receptor (LEPR)
Protein Characteristics:	AA 22-839
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Leptin Receptor protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: FNLSYPITPW RFLKSCMPPN STYDYFLLPA GLSKNTSNSN GHYETAVEPK FNSSGTHFSN
 LSKTTFHCCF RSEQDRNCSL CADNIEGKTF VSTVNSLVFQ QIDANWNIQC WLKGDCLKFI
 CYVESLFKNL FRNYNYKVHL LYVLPEVLED SPLVPQKGSF QMVHCNCSVH ECCECLVPVP
 TAKLNDTLLM CLKITSGGVI FQSPLMSVQP INMVKPDPL GLHMEITDDG NLKISWSSPP
 LVPFPLQYQV KYSENSTTVI READKIVSAT SLLVDSILPG SSYEVQVRGK RLDGPGIWS
 WSTPRVFTTQ DVIYFPPKIL TSVGSNVSFH CIYKKENKIV PSKEIVWWMN LAEKIPQSQY
 DVVSDHVSKV TFFNLNETKP RGKFTYDAVY CCNEHECHHR YAELYVIDVN INISCETDGY
 LTKMTCRWST STIQSLAEST LQLRYHRSSL YCSDIPSHP ISEPKDCYLQ SDGFYECIFQ
 PIFLLSGYTM WIRINHSLGS LDSPPTCVLP DSVVKPLPPS SVKAEITINI GLLKISWEKP
 VFPENNLQFQ IRYGLSGKEV QWKMYEVYDA KSKSVSLPVP DLCAVYAVQV RCKRLDGLGY
 WSNWSNPAYT VMDIKVPMR GPEFWRIING DTMKKEKNVT LLWKPLMKND SLCSVQRYVI
 NHHHTSCNGTW SEDVGNHTKF TFLWTEQAHT VTVLAINSIG ASVANFNLTF SWPMSKVNIV

QSL SAYPLNS SCVIVSWILS PSDYKLMYFI IEWKLNLEDG EIKWLRISSS VKKYYIHDHF
IPIEKYQFSL YPIFMEGVGK PKIINSFTQD DIEKHQSD

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 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 receipt 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.

Product Details

Grade: Crystallography grade

Target Details

Target: Leptin Receptor (LEPR)

Alternative Name: LEPR ([LEPR Products](#))

Background: Receptor for hormone LEP/leptin (Probable) (PubMed:22405007). On ligand binding, mediates LEP central and peripheral effects through the activation of different signaling pathways such as JAK2/STAT3 and MAPK cascade/FOS. 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 anorexigenic factors and suppressing orexigenic neuropeptides, also regulates bone mass and secretion of hypothalamo-pituitary-adrenal hormones (By similarity) (PubMed:9537324). 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:25060689, PubMed:12504075, PubMed:8805376). 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. Involved in the regulation of counter-regulatory response to hypoglycemia by inhibiting neurons of the parabrachial nucleus. Has a specific effect on T lymphocyte responses, differentially regulating the proliferation of naive and memory T -ells. Leptin increases Th1 and suppresses Th2 cytokine production (By similarity). {ECO:0000250|UniProtKB:P48356, ECO:0000269|PubMed:12504075, ECO:0000269|PubMed:22405007, ECO:0000269|PubMed:25060689, ECO:0000269|PubMed:8805376, ECO:0000269|PubMed:9537324, ECO:0000305|PubMed:25232147}., Isoform A: May transport LEP across the blood-brain barrier. Binds LEP and mediates LEP endocytosis. Does not induce phosphorylation of and activate STAT3. {ECO:0000250|UniProtKB:P48356}., Isoform E: Antagonizes Isoform A and isoform B-mediated LEP binding and endocytosis. {ECO:0000250|UniProtKB:P48356}.

Molecular Weight: 94.5 kDa Including tag.

UniProt: [P48357](#)

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 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)

Images



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