

Datasheet for ABIN3109944

FFAR2 Protein (AA 1-330) (rho-1D4 tag)



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1 Image

Overview

Quantity:	1 mg
Target:	FFAR2
Protein Characteristics:	AA 1-330
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FFAR2 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MLPDWKSSLI LMAYIIIFLT GLPANLLALR AFVGRIRQPQ PAPVHILLSS LTLADLLLLL LLPFKIIEAA SNFRWYLPKV VCALTSFGFY SSIYCSTWLL AGISIERYLK VAFPVQYKLS RRPLYGVIAA LVAWVMSFGH CTIVIIVQYL NTTEQVRSGN EITCYENFTD NQLDVVLPVR LELCLVLFPI PMAVTIFCYW RFVWIMLSQP LVGAQRRRRA VGLAVVTLLN FLVCFGPYNV SHLVGYHQRK SPWWRSIQAVV FSSLNASLDP LLFYFSSSVV RRAFGRGLQV LRNQGSLLG RRGKDTAEGT NEDRGVGQGE GMPSSDFTTE
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Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:	<ul style="list-style-type: none"> Made in Germany - from design to production - by highly experienced protein experts. Human FFAR2 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).
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Product Details

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:	Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells: <ol style="list-style-type: none">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.
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Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
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Sterility:	0.22 µm filtered
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Endotoxin Level:	Protein is endotoxin-free.
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Grade:	Crystallography grade
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Target Details

Target:	FFAR2
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Target Details

Alternative Name: FFAR2 ([FFAR2 Products](#))

Background: G protein-coupled receptor that is activated by a major product of dietary fiber digestion, the short chain fatty acids (SCFAs), and that plays a role in the regulation of whole-body energy homeostasis and in intestinal immunity. In omnivorous mammals, the short chain fatty acids acetate, propionate and butyrate are produced primarily by the gut microbiome that metabolizes dietary fibers. SCFAs serve as a source of energy but also act as signaling molecules. That G protein-coupled receptor is probably coupled to the pertussis toxin-sensitive, G(i/o)-alpha family of G proteins but also to the Gq family (PubMed:12496283, PubMed:12711604, PubMed:23589301). Its activation results in the formation of inositol 1,4,5-trisphosphate, the mobilization of intracellular calcium, the phosphorylation of the MAPK3/ERK1 and MAPK1/ERK2 kinases and the inhibition of intracellular cAMP accumulation. May play a role in glucose homeostasis by regulating the secretion of GLP-1, in response to short-chain fatty acids accumulating in the intestine. May also regulate the production of LEP/Leptin, a hormone acting on the central nervous system to inhibit food intake. Finally, may also regulate whole-body energy homeostasis through adipogenesis regulating both differentiation and lipid storage of adipocytes. In parallel to its role in energy homeostasis, may also mediate the activation of the inflammatory and immune responses by SCFA in the intestine, regulating the rapid production of chemokines and cytokines. May also play a role in the resolution of the inflammatory response and control chemotaxis in neutrophils. In addition to SCFAs, may also be activated by the extracellular lectin FCN1 in a process leading to activation of monocytes and inducing the secretion of interleukin-8/IL-8 in response to the presence of microbes (PubMed:21037097). Among SCFAs, the fatty acids containing less than 6 carbons, the most potent activators are probably acetate, propionate and butyrate (PubMed:12496283, PubMed:12711604). Exhibits a SCFA-independent constitutive G protein-coupled receptor activity (PubMed:23066016). {ECO:0000269|PubMed:12496283, ECO:0000269|PubMed:12684041, ECO:0000269|PubMed:12711604, ECO:0000269|PubMed:18801738, ECO:0000269|PubMed:21037097, ECO:0000269|PubMed:23066016, ECO:0000269|PubMed:23589301}.

Molecular Weight: 38.3 kDa Including tag.

UniProt: [O15552](#)

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

Application Details

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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