

Datasheet for ABIN3095109 RORA Protein (AA 1-523) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	RORA
Protein Characteristics:	AA 1-523
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This RORA protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: MESAPAAPDP AASEPGSSGA DAAAGSRETP LNQESARKSE PPAPVRRQSY SSTSRGISVT
 KKTHTSQIEI IPCKICGDKS SGIHYGVITC EGCKGFFRRS QQSNATYSCP RQKNCLIDRT
 SRNRCQHCR L QKCLAVGMSR DAVKFGRMSK KQRDSLAEV QKHRMQQQQR DHQQQPGEAE
 PLTPTYNISA NGLTELHDDL SNYIDGHTPE GSKADSAVSS FYLDIQSPD QSGLDINGIK
 PEPICDYTPA SGFFPYCSFT NGETSPTVSM AELEHLAQNI SKSHLETQY LREELQQITW
 QTFLQEEIEN YQNKQREVMW QLCAIKITEA IQYVVEFAKR IDGFMELCQN DQIVLLKAGS
 LEVVFIRMCR AFDSQNNTVY FDGKYASPDV FKSLGCEDFI SFVFEGKSL CSMHLTEDEI
 ALFSAFVLMS ADRSWLQEKV KIEKLQQIK LALQHVLQKN HREDGILTKL ICKVSTLRAL
 CGRHTEKLMA FKAIPDIVR LHFPPLYKEL FTSEFEPAMQ IDG

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.
 - Human RORA 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.

Grade: Crystallography grade

Target Details

Target: RORA

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

Background: Nuclear receptor that binds DNA as a monomer to ROR response elements (RORE) containing a single core motif half-site 5'-AGGTCA-3' preceded by a short A-T-rich sequence. Key regulator of embryonic development, cellular differentiation, immunity, circadian rhythm as well as lipid, steroid, xenobiotics and glucose metabolism. Considered to have intrinsic transcriptional activity, have some natural ligands like oxysterols that act as agonists (25-hydroxycholesterol) or inverse agonists (7-oxygenated sterols), enhancing or repressing the transcriptional activity, respectively. Recruits distinct combinations of cofactors to target genes regulatory regions to modulate their transcriptional expression, depending on the tissue, time and promoter contexts. Regulates genes involved in photoreceptor development including OPN1SW, OPN1SM and ARR3 and skeletal muscle development with MYOD1. Required for proper cerebellum development, regulates SHH gene expression, among others, to induce granule cells proliferation as well as expression of genes involved in calcium-mediated signal transduction. Regulates the circadian expression of several clock genes, including CLOCK, ARNTL/BMAL1, NPAS2 and CRY1. Competes with NR1D1 for binding to their shared DNA response element on some clock genes such as ARNTL/BMAL1, CRY1 and NR1D1 itself, resulting in NR1D1-mediated repression or RORA-mediated activation of clock genes expression, leading to the circadian pattern of clock genes expression. Therefore influences the period length and stability of the clock. Regulates genes involved in lipid metabolism such as apolipoproteins APOA1, APOA5, APOC3 and PPARG. In liver, has specific and redundant functions with RORC as positive or negative modulator of expression of genes encoding phase I and phase II proteins involved in the metabolism of lipids, steroids and xenobiotics, such as CYP7B1 and SULT2A1. Induces a rhythmic expression of some of these genes. In addition, interplays functionally with NR1H2 and NR1H3 for the regulation of genes involved in cholesterol metabolism. Also involved in the regulation of hepatic glucose metabolism through the modulation of G6PC and PCK1. In adipose tissue, plays a role as negative regulator of adipocyte differentiation, probably acting through dual mechanisms. May suppress CEBPB-dependent adipogenesis through direct interaction and PPARG-dependent adipogenesis through competition for DNA-binding. Downstream of IL6 and TGFB and synergistically with RORC isoform 2, is implicated in the lineage specification of uncommitted CD4(+) T-helper (T(H)) cells into T(H)17 cells, antagonizing the T(H)1 program. Probably regulates IL17 and IL17F expression on T(H) by binding to the essential enhancer conserved non-coding sequence 2 (CNS2) in the IL17-IL17F locus. Involved in hypoxia signaling by interacting with and activating the transcriptional activity of HIF1A. May inhibit cell growth in response to cellular stress. May exert an anti-inflammatory

Target Details

role by inducing CHUK expression and inhibiting NF-kappa-B signaling.
{ECO:0000269|PubMed:10478845, ECO:0000269|PubMed:11053433,
ECO:0000269|PubMed:11252722, ECO:0000269|PubMed:11554739,
ECO:0000269|PubMed:12467577, ECO:0000269|PubMed:14570920,
ECO:0000269|PubMed:15781255, ECO:0000269|PubMed:15790933,
ECO:0000269|PubMed:16462772, ECO:0000269|PubMed:17512500,
ECO:0000269|PubMed:18005000, ECO:0000269|PubMed:18354202,
ECO:0000269|PubMed:18658046, ECO:0000269|PubMed:19965867,
ECO:0000269|PubMed:21499262, ECO:0000269|PubMed:7926749,
ECO:0000269|PubMed:9328355, ECO:0000269|PubMed:9862959}.

Molecular Weight: 59.9 kDa Including tag.

UniProt: [P35398](#)

Pathways: [Nuclear Receptor Transcription Pathway](#), [Steroid Hormone Mediated Signaling Pathway](#),
[Regulation of Lipid Metabolism by PPARalpha](#)

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.

Handling

Expiry Date: Unlimited (if stored properly)

Images



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