

Datasheet for ABIN3137404  
**NR4A3 Protein (AA 1-627) (His tag)**[Go to Product page](#)

## 1 Image

## Overview

Quantity:	1 mg
Target:	NR4A3
Protein Characteristics:	AA 1-627
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NR4A3 protein is labelled with His tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS), Crystallization (Crys)

## Product Details

Sequence:	MPCVQAQYSP SPPGSTYATQ TYGSEYTTIEI MNPDYTKLTM DLGSTGIMAT ATTSLSFSST FMEGYPSSE LKPSCLYQMP PSGRPRLIKM EEGREHGYHH HHHHHHHHHH HQQQQPSIPP PSGPEDEVLP STSMYFKQSP PSTPTTPGFP PQAGALWDDE LPSAPGCIAP GPLLDPQMKA VPPMAAAARF PIFFKPSPPH PPAPSPAGGH HLGYPDPTAAA ALSLPLGAAA AAGSQAAALE GHPYGLPLAK RTATLTFPPL GLTASPTASS LLGESPSLPS PPNRSSSSSGE GTCAVCGDNA ACQHYGVRTC EGCKGFFKRT VQKNAKYVCL ANKNCPVDR RRNRQCQYCRF QKCLSVGMVK EVRVTDLSKG RRRLPSKPK SPLQQEPSQP SPPSPICMM NALVRALTD TPRDLDSRY CPTDQATAGT DAEHVQQFY NLLTASIDVSR SWAEKIPGFT DLPKEDQTLL IESAFLELFV LRLSIRSNTA EDKFVFCNGL VLHRLQCLRG FGEWLDSIKD FSLNLQSLNL DIQALACLSA LSMITERHGL KEPKRVEELC TKITSSLKDH QRKGQALEPS EPKVLRALVE LRKICTQGLQ RIFYLKLEDL VPPPSVIDKL FLDTLPF
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**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a**

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**special request, please contact us.**

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**Characteristics:**

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Nr4a3 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

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Target: NR4A3

Alternative Name: Nr4a3 ([NR4A3 Products](#))

Background: Transcriptional activator that binds to regulatory elements in promoter regions in a cell- and response element (target)-specific manner (PubMed:12709428). Induces gene expression by binding as monomers to the NR4A1 response element (NBRE) 5'-AAAAGGTCA-3' site and as homodimers to the Nur response element (NurRE) site in the promoter of their regulated target genes (By similarity). Plays a role in the regulation of proliferation, survival and differentiation of many different cell types and also in metabolism and inflammation. Mediates proliferation of vascular smooth muscle, myeloid progenitor cell and type B pancreatic cells, promotes mitogen-induced vascular smooth muscle cell proliferation through transactivation of SKP2 promoter by binding a NBRE site (PubMed:21868379). Upon PDGF stimulation, stimulates vascular smooth muscle cell proliferation by regulating CCND1 and CCND2 expression. In islets, induces type B pancreatic cell proliferation through up-regulation of genes that activate cell cycle, as well as genes that cause degradation of the CDKN1A (By similarity). Negatively regulates myeloid progenitor cell proliferation by repressing RUNX1 in a NBRE site-independent manner (PubMed:24806827). During inner ear, plays a role as a key mediator of the proliferative growth phase of semicircular canal development (PubMed:11784868). Mediates also survival of neuron and smooth muscle cells, mediates CREB-induced neuronal survival, and during hippocampus development, plays a critical role in pyramidal cell survival and axonal guidance (PubMed:20566846, PubMed:15456880). Is required for S phase entry of the cell cycle and survival of smooth muscle cells by inducing CCND1, resulting in RB1 phosphorylation. Binds to NBRE motif in CCND1 promoter, resulting in the activation of the promoter and CCND1 transcription (PubMed:19153266). Plays also a role in inflammation, upon TNF stimulation, mediates monocyte adhesion by inducing the expression of VCAM1 and ICAM1 by binding to the NBRE consensus site (PubMed:20558821). In mast cells activated by Fc-epsilon receptor cross-linking, promotes the synthesis and release of cytokines but impairs events leading to degranulation (PubMed:24586680). Plays also a role in metabolism, by modulating feeding behavior, and by playing a role in energy balance by inhibiting the glucocorticoid-induced orexigenic neuropeptides AGRP expression, at least in part by forming a complex with activated NR3C1 on the AGRP- glucocorticoid response element (GRE), and thus weakening the DNA binding activity of NR3C1 (PubMed:23897430, PubMed:19523439). Upon catecholamines stimulation, regulates gene expression that controls oxidative metabolism in skeletal muscle (PubMed:18325999). Plays a role in glucose transport by regulating translocation of the SLC2A4 glucose transporter to the cell surface (By similarity). Finally, during gastrulation plays a crucial role in the formation of anterior mesoderm by controlling cell migration

## Target Details

(PubMed:13129926). Inhibits adipogenesis (PubMed:18945812). Also participates in cardiac hypertrophy by activating PARP1 (By similarity). {ECO:0000250|UniProtKB:P51179, ECO:0000250|UniProtKB:Q92570, ECO:0000269|PubMed:11784868, ECO:0000269|PubMed:12709428, ECO:0000269|PubMed:13129926, ECO:0000269|PubMed:15456880, ECO:0000269|PubMed:18325999, ECO:0000269|PubMed:18945812, ECO:0000269|PubMed:19153266, ECO:0000269|PubMed:19523439, ECO:0000269|PubMed:20558821, ECO:0000269|PubMed:20566846, ECO:0000269|PubMed:21868379, ECO:0000269|PubMed:23897430, ECO:0000269|PubMed:24586680, ECO:0000269|PubMed:24806827}.

Molecular Weight: 69.4 kDa Including tag.

UniProt: [Q9QZB6](#)

Pathways: [Fc-epsilon Receptor Signaling Pathway](#), [Nuclear Receptor Transcription Pathway](#), [Steroid Hormone Mediated Signaling Pathway](#)

## 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: 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.

## Handling

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Expiry Date: Unlimited (if stored properly)

## Images

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