

Datasheet for ABIN3118365

NADPH Oxidase 4 Protein (NOX4) (AA 1-578) (rho-1D4 tag)



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1 Image

Overview

Quantity:	1 mg
Target:	NADPH Oxidase 4 (NOX4)
Protein Characteristics:	AA 1-578
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NADPH Oxidase 4 protein is labelled with rho-1D4 tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence: MAVSWRSWLA NEGVKHLCLF IWLSMNVLLF WKTFLLYNQG PEYHYLHQML GLGLCLSRAS
 ASVLNLNCSL ILLPMCRTL AYLRGSQKVP SRRTRRLLDK SRTFHITCGV TICIFSGVHV
 AAHLVNALNF SVNYSEDFVE LNAARYRDED PRKLLFTTVP GLTGVCMVVV LFLMITASTY
 AIRVSNYDIF WYTHNLFFVF YMLLTLHVSG GLLKYQTNLD THPPGCISLN RTSSQNISLP
 EYFSEHFHEP FPEGFSKPAE FTQHKFVKIC MEEPRFQANF PQTWLWISGP LCLYCAERLY
 RYIRSNKPVT IISVMSPSD VMEIRMVKEN FKARPGQYIT LHCPVSVALE NHPFTLT MCP
 TETKATFGVH LKIVGDWTER FRDLLPPSS QDSEILPFIQ SRNYPKLYID GPFSGPFEEES
 LNYEVS LCVA GGIGVTPFAS ILNTLLDDWK PYKLRRLYFI WVCARDIQSFR WFADLLCMLH
 NKFVQENRPD YVNIQLYLSQ TDGIQKIIE KYHALNSRLF IGRPRWKLLF DEIAKYNRGK
 TVGVFCCGPN SLSKTLHKLS NQNNSYGTRF EYNKESFS

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 NOX4 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:
- Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:
1. Membrane proteins are fractionated 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 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:	NADPH Oxidase 4 (NOX4)
Alternative Name:	NOX4 (NOX4 Products)
Background:	Constitutive NADPH oxidase which generates superoxide intracellularly upon formation of a complex with CYBA/p22phox. Regulates signaling cascades probably through phosphatases inhibition. May function as an oxygen sensor regulating the KCNK3/TASK-1 potassium channel and HIF1A activity. May regulate insulin signaling cascade. May play a role in apoptosis, bone resorption and lipopolysaccharide-mediated activation of NFkB. May produce superoxide in the nucleus and play a role in regulating gene expression upon cell stimulation. Isoform 3 is not functional. Isoform 5 and isoform 6 display reduced activity., Isoform 4: Involved in redox signaling in vascular cells. Constitutively and NADPH-dependently generates reactive oxygen species (ROS). Modulates the nuclear activation of ERK1/2 and the ELK1 transcription factor, and is capable of inducing nuclear DNA damage. Displays an increased activity relative to isoform 1.
Molecular Weight:	68.1 kDa Including tag.
UniProt:	Q9NPH5
Pathways:	Carbohydrate Homeostasis , Smooth Muscle Cell Migration

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.

Handling

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