Datasheet for ABIN3109756

NPC1 Protein (AA 23-1278) (rho-1D4 tag)

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1 Image

Overview

Quantity:	1 mg
Target:	NPC1
Protein Characteristics:	AA 23-1278
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NPC1 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), ELISA, Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	QSCVWYGECG IAYGDKRYNC EYSGPPKPLP KDGYDLVQEL CPGFFFGNVS LCCDVRQLQT LKDNLQLPLQ FLSRCPSCFY NLLNLFCELT CSPRQSQFLN VTATEDYVDP VTNQTKTNVK ELQYYVGQSF ANAMYNACRD VEAPSSNDKA LGLLCGKDAD ACNATNWIEY MFNKDNGQAP FTITPVFSDF PVHGMEPMNN ATKGCDESVD EVTAPCSCQD CSIVCGPKPQ PPPPPAPWTI LGLDAMYVIM WITYMAFLLV FFGAFFAVWC YRKRYFVSEY TPIDSNIAFS VNASDKGEAS CCDPVSAAFE GCLRRLFTRW GSFCVRNPGC VIFFSLVFIT ACSSGLVFVR VTTNPVDLWS APSSQARLEK EYFDQHFGPF FRTEQLIIRA PLTDKHIYQP YPSGADVPFG PPLDIQILHQ VLDLQIAIEN ITASYDNETV TLQDICLAPL SPYNTNCTIL SVLNYFQNSH SVLDHKKGDD FFVYADYHTH FLYCVRAPAS LNDTSLLHDP CLGTFGGPVF PWLVLGGYDD QNYNNATALV ITFPVNNYYN DTEKLQRAQA WEKEFINFVK NYKNPNLTIS FTAERSIEDE LNRESDSDVF TVVISYAIMF LYISLALGHM KSCRRLLVDS KVSLGIAGIL IVLSSVACSL GVFSYIGLPL TLIVIEVIPF LVLAVGVDNI FILVQAYQRD ERLQGETLDQ QLGRVLGEVA PSMFLSSFSE TVAFFLGALS

VMPAVHTFSL FAGLAVFIDF LLQITCFVSL LGLDIKRQEK NRLDIFCCVR GAEDGTSVQA SESCLFRFFK NSYSPLLLKD WMRPIVIAIF VGVLSFSIAV LNKVDIGLDQ SLSMPDDSYM VDYFKSISQY LHAGPPVYFV LEEGHDYTSS KGQNMVCGGM GCNNDSLVQQ IFNAAQLDNY TRIGFAPSSW IDDYFDWVKP QSSCCRVDNI TDQFCNASVV DPACVRCRPL TPEGKQRPQG GDFMRFLPMF LSDNPNPKCG KGGHAAYSSA VNILLGHGTR VGATYFMTYH TVLQTSADFI DALKKARLIA SNVTETMGIN GSAYRVFPYS VFYVFYEQYL TIIDDTIFNL GVSLGAIFLV TMVLLGCELW SAVIMCATIA MVLVNMFGVM WLWGISLNAV SLVNLVMSCG ISVEFCSHIT RAFTVSMKGS RVERAEEALA HMGSSVFSGI TLTKFGGIVV LAFAKSQIFQ IFYFRMYLAM VLLGATHGLI FLPVLLSYIG PSVNKAKSCA TEERYKGTER ERLLNF

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 NPC1 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 receival 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 fractioned by ultracentrifugation and subsequently solubilized with

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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.

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:	NPC1
Alternative Name:	NPC1 (NPC1 Products)
Background:	Intracellular cholesterol transporter which acts in concert with NPC2 and plays an important role in the egress of cholesterol from the endosomal/lysosomal compartment. Both NPC1 and NPC2 function as the cellular 'tag team duo' (TTD) to catalyze the mobilization of cholesterol within the multivesicular environment of the late endosome (LE) to effect egress through the limiting bilayer of the LE. NPC2 binds unesterified cholesterol that has been released from LDLs in the lumen of the late endosomes/lysosomes and transfers it to the cholesterol-binding pocket of the N-terminal domain of NPC1. Cholesterol binds to NPC1 with the hydroxyl group buried in the binding pocket and is exported from the limiting membrane of late endosomes/lysosomes to the ER and plasma membrane by an unknown mechanism. Binds oxysterol with higher affinity than cholesterol. May play a role in vesicular trafficking in glia, a process that may be crucial for maintaining the structural and functional integrity of nerve terminals. {ECO:0000269|PubMed:18772377, ECO:0000269|PubMed:19563754}., (Microbial infection) Acts as an endosomal entry receptor for ebolavirus. {ECO:0000269|PubMed:21866103, ECO:0000269|PubMed:25855742}.
Molecular Weight:	141.1 kDa Including tag.
UniProt:	O15118

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 gurantee 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

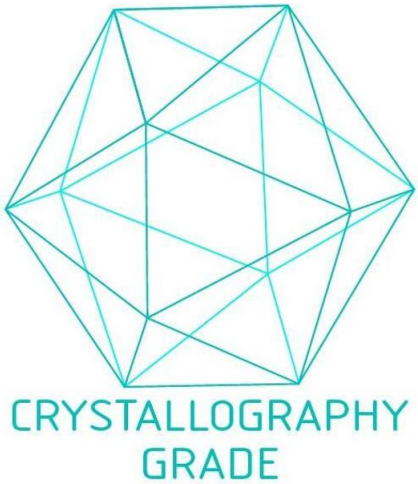

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process