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Datasheet for ABIN3114658  
**NNT Protein (AA 44-1086) (rho-1D4 tag)**

### Overview

Quantity:	1 mg
Target:	NNT
Protein Characteristics:	AA 44-1086
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NNT protein is labelled with rho-1D4 tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

### Product Details

Sequence: CKAPVKPGIP YKQLTVGVPK EIFQNEKRVA LSPAGVQNLV KQGFNVVVES GAGEASKFSD  
DHYRVAGA QI QGAKEVLASD LVVKVRAPMV NPTLGVHEAD LLKTSGLTIS FIYPAQNPEL  
LNKLSQRKTT VLAMDQVPRV TIAQGYDALS SMANIAGYKA VVLAANHFRG FFTGQITAAG  
KVPPAKILIV GGGVAGLASA GAAKSMGAIV RGFDTAAAL EQFKSLGAEP LEVDLKESGE  
GQGGYAKEMS KEFIEAEMKL FAQQCKEVDI LISTALIPGK KAPVLFNKEM IESMKEGSVV  
VDLAAEAGGN FETTKPGELY IHKGITHIGY TDLPSRMTQ ASTLYSNNIT KLLKAISPDK  
DNFYFDVKDD FDFGTMGHVI RGTVMKDGK VIFPAPTPKN IPQGAPVKQK TVAELEA EKA  
ATITPFRKTM STASAYTAGL TGILGLGIAA PNLAFSQMVT TFGLAGIVGY HTVWGVTPAL  
HSPLMSVTNA ISGLTAVGGL ALMGHLYPS TTSQGLAALA AFISSVNIAG GFLVTQRMLD  
MFKRPTDPPE YNYLYLLPAG TFGGYLAAL YSGYNIEQIM YLGSGLCCVG ALAGLSTQGT  
ARLGNALGMI GVAGGLAATL GVLKPGPELL AQMSGAMALG GTIGLTIKR IQISDLPQLV  
AAFHSLVGLA AVLT CIAEYI IEYPHFATDA AANLTKIVAY LGTYIGGVTF SGSLIAYGKL

QGLLKSAPLL LPGRHLLNAG LLAASVGGII PFMVDPSFTT GITCLGSVSA LSAVMGVTLT  
AAIGGADMPV VITVLNSYSG WALCAEGFLL NNNLLTIVGA LIGSSGAILS YIMCVAMNRS  
LANVILGGYG TTSTAGGKPM EISGTHTEIN LDNAIDMIRE ANSIITPGY GLCAAKAQYP  
IADLVKMLTE QGKKVRFGIH PVAGRMPGQL NVLLAEAGVP YDIVLEMDEI NHDFPDTDLV  
LVIGANDTVN SAAQEDPNSI IAGMPVLEWV KSKQVIVMKR SLGVGYAAVD NPIFYKPNTA  
MLLGDAAKTC DALQAKVRES YQK

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human NNT 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.

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### 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

## Product Details

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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

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Target: NNT

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

Background: The transhydrogenation between NADH and NADP is coupled to respiration and ATP hydrolysis and functions as a proton pump across the membrane. May play a role in reactive oxygen species (ROS) detoxification in the adrenal gland. {ECO:0000269|PubMed:22634753}.

Molecular Weight: 110.2 kDa Including tag.

UniProt: [Q13423](#)

Pathways: [Proton Transport](#)

## Application Details

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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

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Format: Liquid

## Handling

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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)