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## NAE1 Protein (AA 2-534) (His tag)





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#### Overview

Quantity:	1 mg
Target:	NAE1
Protein Characteristics:	AA 2-534
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NAE1 protein is labelled with His tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS), Crystallization (Crys)

### **Product Details**

Sequence:

AQLGKLLKEQ KYDRQLRLWG DHGQEALESA HVCLINATAT GTEILKNLVL PGIGSFTIID
GNQVSGEDAG NNFFLQRSSI GKNRAEAAME FLQELNSDVS GSFVEESPEN LLDNDPSFFC
RFTVVVATQL PESTSLRLAD VLWNSQIPLL ICRTYGLVGY MRIIIKEHPV IESHPDNALE
DLRLDKPFPE LREHFQSYDL DHMEKKDHSH TPWIVIIAKY LAQWYSETNG RIPKTYKEKE
DFRDLIRQGI LKNENGAPED EENFEEAIKN VNTALNTTQI PSSIEDIFND DRCINITKQT
PSFWILARAL KEFVAKEGQG NLPVRGTIPD MIADSGKYIK LQNVYREKAK KDAAAVGNHV
AKLLQSIGQA PESISEKELK LLCSNSAFLR VVRCRSLAEE YGLDTINKDE IISSMDNPDN
EIVLYLMLRA VDRFHKQQGR YPGVSNYQVE EDIGKLKSCL TGFLQEYGLS VMVKDDYVHE
FCRYGAAEPH TIAAFLGGAA AQEVIKIITK QFVIFNNTYI YSGMSQTSAT FQL

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 NAE1 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:

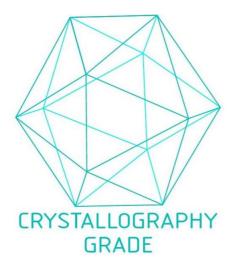
Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

- 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**

l'arget Details		
Target:	NAE1	
Alternative Name:	NAE1 (NAE1 Products)	
Background:	Regulatory subunit of the dimeric UBA3-NAE1 E1 enzyme. E1 activates NEDD8 by first adenylating its C-terminal glycine residue with ATP, thereafter linking this residue to the side chain of the catalytic cysteine, yielding a NEDD8-UBA3 thioester and free AMP. E1 finally transfers NEDD8 to the catalytic cysteine of UBE2M. Necessary for cell cycle progression through the S-M checkpoint. Overexpression of NAE1 causes apoptosis through deregulation of NEDD8 conjugation. {ECO:0000269 PubMed:10207026, ECO:0000269 PubMed:10722740, ECO:0000269 PubMed:12740388}.	
Molecular Weight:	61.1 kDa Including tag.	
UniProt:	Q13564	
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.	
Expiry Date:	Unlimited (if stored properly)	



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