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# NEIL3 Protein (AA 2-606) (His tag)





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#### Overview

Quantity:	1 mg
Target:	NEIL3
Protein Characteristics:	AA 2-606
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NEIL3 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), Crystallization (Crys), ELISA

### **Product Details**

Sequence:

VEGPGCTLNG EKIRARVLPG QAVTGVRGTA LQSLLGPAMS PAASLADVAT SAAPMNAKDS
GWKLLRLFNG YVYSGVETLG KELFMYFGPR ALRIHFGMKG SILINPREGE NRAGASPALA
VQLTRDLICF YDSSVELRNS VESQQRVRVM EELDICSPKF SFSRAESEVK KQGDRMLCDV
LLDQRVLPGV GNIIKNEALF DSGLHPAVKV CQLSDKQACH LVKMTRDFSI LFYRCCKAGS
AISKHCKVYK RPNCDQCHSK ITVCRFGENS RMTYFCPHCQ KENPQCVQVC QLPTRNTEIS
WTPRGEDCFT DSVARKSEEQ WSCVVCTLIN RPSAKACDAC LTTRPLDSVL KNRENSIAFN
NLVKYPCNNF ENTHTEVKIN RKTAFGNTTL VLTDLSNKSS ALARKKRANH TIDGESQMFL
PTDIGFSDSQ HPSKEGINYI TQPSNKVNIS PTVCAQSKLF SSAHKKFKPA HTSATELKSY
NSGLSNSELQ TNRTRGHHSK SDGSPLCKMH HRRCVLRVVR KDGENKGRQF YACSLPRGAQ
CGFFEWADLS FPFCRHGKRS IMKTVLKIGP NNGKNFFVCP LEKKKQCNFF QWAENGPGME
IVPGC

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a

# **Product Details** special request, please contact us. Characteristics: · Made in Germany - from design to production - by highly experienced protein experts. · Mouse Neil3 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.

0.22 µm filtered

Protein is endotoxin free.

Crystallography grade

Purity:

Sterility:

Grade:

Endotoxin Level:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

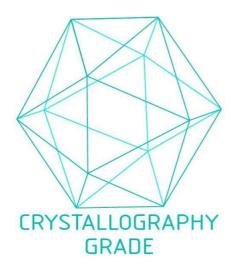
# Target Details

Target:	NEIL3
Alternative Name:	Neil3 (NEIL3 Products)
Background:	DNA glycosylase which prefers single-stranded DNA (ssDNA), or partially ssDNA structures
	such as bubble and fork structures, to double-stranded DNA (dsDNA). In vitro, displays strong
	glycosylase activity towards the hydantoin lesions spiroiminodihydantoin (Sp) and
	guanidinohydantoin (Gh) in both ssDNA and dsDNA, also recognizes FapyA, FapyG, 5-OHU, 5-
	OHC, 5-OHMH, Tg and 8-oxoA lesions in ssDNA. No activity on 8-oxoG detected. Also shows
	weak DNA-(apurinic or apyrimidinic site) lyase activity. In vivo, appears to be the primary
	enzyme involved in removing Sp and Gh from ssDNA in neonatal tissues. Seems to be an
	important facilitator of cell proliferation in certain populations, for example neural
	stem/progenitor cells and tumor cells, suggesting a role in replication-associated DNA repair.
	{ECO:0000269 PubMed:20185759, ECO:0000269 PubMed:22065741,
	ECO:0000269 PubMed:22569481, ECO:0000269 PubMed:22959434,
	ECO:0000269 PubMed:23305905, ECO:0000269 PubMed:23313161}.
Molecular Weight:	68.2 kDa Including tag.
UniProt:	Q8K203
Pathways:	DNA Damage Repair
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:	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

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