

# Recombinant e.coli nanA protein

Catalog Number: ATGP1032

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-297aa

### UniProt No.

P0A6L4

### NCBI Accession No.

NP\_417692

### Alternative Names

N-acetylneuraminate lyase, npl

## PRODUCT SPECIFICATION

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### Molecular Weight

34.7 kDa (317aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol

### Purity

> 95% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

NanA, also known as N-acetylneuraminate lyase, belongs to the family of lyases, specifically the oxo-acid-lyases, which cleave carbon-carbon bonds. NanA catalyzes the cleavage of N-acetylneuraminic acid (sialic acid) to form pyruvate and N-acetyl-D-mannosamine. This protein was inhibited by reduction with NaBH<sub>4</sub> in the presence of the substrate, indicating that it belongs to the Schiff-base-forming Class I aldolases. NanA was strongly inhibited by Cu<sup>2+</sup> ions, p-chloromercuribenzoate and N-bromosuccinimide, and also inhibited competitively by the reaction product, pyruvate, and its structurally related compounds, dihydroxyacetone and DL-glyceraldehyde.

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Recombinant E. coli nanA protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography.

### Amino acid Sequence

MGSSHHHHHH SGLVPRGSH MATNLRGVMA ALLTPFDQQQ ALDKASLRRL VQFNIQQGID GLYVGGSTGE AFVQSLSERE  
QVLEIVAEAA KGKIKLIAHV GCVSTAESQQ LAASAKRYGF DAVSAVTPFY YPFSFEEHCD HYRAIIDSAD GLPMVVYNIP  
ALSGVKLTLT QINTLVTLPG VGALKQTSQD LYQMEQIRRE HPDLVLYNGY DEIFASGLLA GADGGIGSTY NIMGWRYQGI  
VKALKEGDIQ TAQKLQTECN KVIDLLIKTG VFRGLKTVLH YMDVVSVPLC RKPFGPVDEK YLPELKALAQ QLMQERG

### General References

Aisaka K., et al. (1991) Biochem. J. 276:541-546

Izard T., et al. (1994) Structure 2:361-369

## DATA

### SDS-PAGE

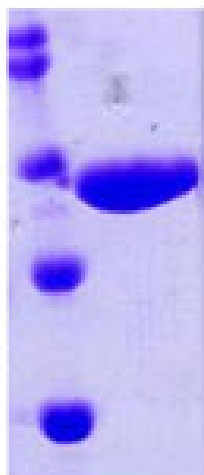
(kDa)

57

40

28

18



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

15% SDS-PAGE (3ug)