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# Recombinant e.coli nanA protein

Catalog Number: ATGP1032

#### PRODUCT INFORMATION

## **Expression system**

E.coli

#### **Domain**

1-297aa

#### **UniProt No.**

P0A6I4

#### **NCBI Accession No.**

NP 417692

#### **Alternative Names**

N-acetylneuraminate lyase, npl

#### **PRODUCT SPECIFICATION**

#### **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**

#### **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 NaBH4 in the presence of the substrate, indicating that it belongs to the Schiff-base-forming Class I aldolases. NanA was strongly inhibited by Cu2+ 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**

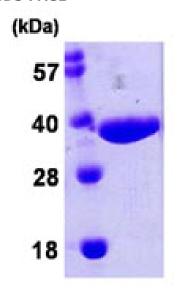
MGSSHHHHHH SSGLVPRGSH MATNLRGVMA ALLTPFDQQQ ALDKASLRRL VQFNIQQGID GLYVGGSTGE AFVQSLSERE QVLEIVAEEA KGKIKLIAHV GCVSTAESQQ LAASAKRYGF DAVSAVTPFY YPFSFEEHCD HYRAIIDSAD GLPMVVYNIP ALSGVKLTLD QINTLVTLPG VGALKQTSGD LYQMEQIRRE HPDLVLYNGY DEIFASGLLA GADGGIGSTY NIMGWRYQGI VKALKEGDIQ TAQKLQTECN KVIDLLIKTG VFRGLKTVLH 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**



15% SDS-PAGE (3ug)

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

