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Recombinant e.coli nanA protein

Catalog Number: ATGP1032

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-297aa

UniProt No.
P0A6L4

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

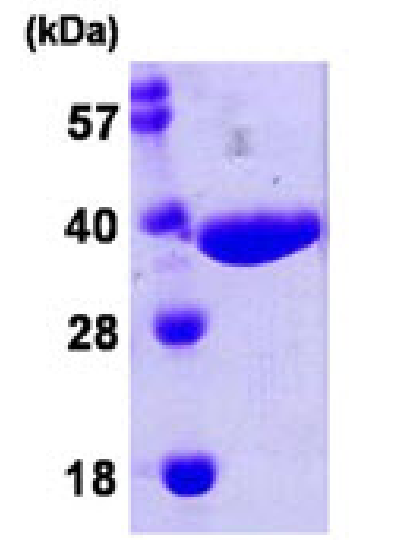
MGSSHHHHHH SSGLVPRGSH MATNLRGVMA ALLTPFDQQQ ALDKASLRRL VQFNIQQGID GLYVGGSTGE AFVQSLSERE QVLEIVAEEA KGKIKLIAHV GCVSTAESQQ LAASAKRYGF DAVSAVTPFY YPFSFEEHCD HYRAIIDSAD GLPMVVYNIP ALSGVKLTLD QINTLVTLPG VGALKQTSGD LYQMEQIRRE HPDLVLYNGY DEIFASGLLA GADGGIGSTY NIMGWRYQGI VKALKEGDIQ TAQKLQTECN KVIDLLIKTG VFRGLKTVLH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