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**Product Data Sheet**


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Product Name: NANA E.Coli  
 Cat. No.: GP21972  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	N-acetylneuraminate lyase; N-acetylneuraminate pyruvate-lyase; N-acetylneuraminic acid aldolase; NALase; Sialate lyase; Sialic acid aldolase; Sialic acid lyase; nanA; npl; b3225; JW3194.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MATNLRGVMA ALLTPFDQQQ ALDKASLRRL VQFNIQQGID GLYVGGSTGE AFVQSLSERE QVLEIVAEAA KGKIKLIAHV GCVSTAESQQ LAASAKRYGF DAVSAVTPFY YPFSFEEHCD HYRAIIDSAD GLPMVVYNIP ALSGVKLTLD QINTLVTLPGVGALKQTSGD LYQMEQIRRE HPDLVLYNGY DEIFASGLLA GADGGIGSTY NIMGWRYQGI VKALKEGDIQ TAQKLQTECN KVIDLLIKTG VFRGLKTVLH YMDVVSVP LC RKPFGPVDEK YLPELKALAQ QLMQERG.		
Formulation	The NANA protein solution (1mg/ml) 20mM Tris-HCl buffer (pH8.0) and 20% glycerol.		

**Introduction**

N-acetylneuraminate lyase (NanA) is a member of a 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. NanA is inhibited by reduction with NaBH<sub>4</sub> in the presence of the substrate, which indicates that it belongs to the Schiff-base-forming Class I aldolases. NanA is strongly inhibited by Cu<sup>2+</sup> ions, p-chloromercuribenzoate and N-bromosuccinimide, it is also inhibited competitively by the reaction product, pyruvate, and its structurally related compounds, dihydroxyacetone and DL-glyceraldehyde.

**Stability**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer

**Caution: Product has not been fully validated for medical applications. For research use only.**

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periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

NANA produced in E.Coli is a single, non-glycosylated polypeptide chain containing 317 amino acids (1-297 a.a.) and having a molecular mass of 34.7kDa. NANA is fused to a 20 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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