

Recombinant human NANS protein

Catalog Number: ATGP0784

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-359aa

UniProt No.

Q9NR45

NCBI Accession No.

NP_061819

Alternative Names

Sialic acid synthase, SAS, N acetylneuraminase synthase

PRODUCT SPECIFICATION

Molecular Weight

42.4 kDa (379aa) confirmed by MALDI-TOF

Concentration

0.5mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.1M NaCl, 1mM DTT, 10% 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

NANS, also known as SAS, is a 359 amino acid protein that contains one AFP (antifreeze proteins) -like domain and functions in the biosynthesis of sialic acids. Expressed ubiquitously, NANS enzymatically catalyzes the H₂O-dependent formation of N-acetylneuraminic acid (Neu5Ac) and 2-keto-3-deoxy-D-glycero-D-galacto-nononic acid (KDN), both of which are sialic acids. NANS uses N-acetylmannosamine 6-phosphate as a substrate for Neu5Ac synthesis and mannose 6-phosphate as a substrate for KDN synthesis. Recombinant human NANS protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

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Amino acid Sequence

MGSSHHHHHH SSGLVPRGSH MPLELELCPG RWVGGQHPCF IIAEIGQNHQ GDL DVAKRMI RMAKECGADC AKFQKSELEF
KFNRKALERP YTSKHSWGKT YGEHKRHLEF SHDQYRELQR YAEVGIFFT ASGMDEMAVE FLHELNVFFF KVGSGDTNNF
PYLEKTAKKG RPMVISSGMQ SMDTMKQVYQ IVKPLNPNFC FLQCTSAYPL QPEDVNL RVI SEYQKLFPI PIGYSGHETG
IAISVAVAL GAKVLERHIT LDKTWKGS DH SASLEPGELA ELVRSVRLVE RALGSPTKQL LPCEMACNEK LGKSVVAKVK
IPEGTILTMD MLTVKVGEPK GYPPE DIFNL VGKKVLVTVE EDDTIMEELV DNHGKIKS

General References

Milstein O., et al. (2008) J Biol Chem. 283(49):34414-22.

Aldape MJ., et al. (2007) J Infect Dis. 195(12):1838-45.

DATA

SDS-PAGE



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

15% SDS-PAGE (3ug)