

Recombinant Human GNE, His-tagged

Cat. No. GNE-94H **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Human Bifunctional UDP-N-Acetylglucosamine 2-Epimerase/N-Acetylmannosamine Kinase/GNE is produced by our mammalian expression system in human cells. The target protein is expressed with sequence (Met1-Tyr722) of Human GNE fused with a 6His tag at the C-terminus.

Species Human

Source HEK293

Description Bifunctional UDP-N-Acetylglucosamine 2-Epimerase/N-Acetylmannosamine Kinase (GNE) contains two regions: UDP-N-acetylglucosamine 2-epimerase that belongs to the UDP-N-acetylglucosamine 2-epimerase family and N-acetylmannosamine kinase that belongs to the ROK (NagC/XylR) family. GNE localizes to the cytoplasm and exists as a homodimer and homohexamer. GNE is widely expressed, with the highest levels observed in the liver and placenta. GNE regulates and initiates biosynthesis of N-acetylneuraminic acid (NeuAc), a precursor of sialic acids. It is required for normal sialylation in hematopoietic cells. Sialylation is implicated in cell adhesion, signal transduction, tumorigenicity, and metastatic behavior of malignant cells. In addition, GNE plays an essential role in early development.

AA Sequence MEKNGNNRKLRCVATCNRADYSKLAPIMFGIKTEPEFFELDVVVLGSHLIDYDGYNT
YRMIEQDD FDINTRLHTIVRGEDEAAMVESVGLALVKLPDVLNRLKPDIMIVHGDRFD
ALALATSAALMNIRI LHIEGGEVSGTIDDSIRHAITKLAHYHVCCTRSAEQHLISMCED
HDRILLAGCPSYDKLLSAKNK DYMSIIRMWLGDDVKSKDYIVALQHPVTTDIKHSIKM

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

FELTLDALISFNKRTLVLFPNIDAGSKE MVRVMRKKGIEHHPNFRAVKHVPFDQFIQL
 VAHAGCMIGNSSCGVREVGAFGTPVINLGTRQIGR ETGENVLHVRDADTQDKILQA
 LHLQFGKQYPCSKIYGDGNAVPRILKFLKSIDLQEPLQKKFCFP PVKENISQDIDHILE
 TLSALAVDLGGTNLRVAIVSMKGEIVKKYTQFNPKTYEERINLILQMCVE AAAEAVKL
 NCRILGVGISTGGRVNPREGIVLHSTKLIQEWNSVDLRTPLSDTLHLPVWVDNDGNC
 AALAERKFGQGKLENFVTLITGTGIGGGIIHQHELIHGSSFCAAELGHLVVSLDGPD
 CSCGSHG CIEAYASGMALQREAKKLHDEDLLLVEGMSVPKDEAVGALHLIQAALG
 NAKAQILRTAGTALG LGVVNILHTMNP SLVILSGVLASHYIHIVKDVIRQQALSSVQD
 VDVVSDLVDPALLGAASMVLD YTTRRIYVDHHHHHH

Endotoxin Less than 0.1 ng/μg (1 IEU/μg).

Purity Greater than 95% as determined by reducing SDS-PAGE.

GENE INFORMATION

Gene Name [GNE glucosamine \(UDP-N-acetyl\)-2-epimerase/N-acetylmannosamine kinase \[Homo sapiens \]](#)

Official Symbol GNE

Synonyms GNE; glucosamine (UDP-N-acetyl)-2-epimerase/N-acetylmannosamine kinase; IBM2, UDP N acetylglucosamine 2 epimerase/N acetylmannosamine kinase; bifunctional UDP-N-acetylglucosamine 2-epimerase/N-acetylmannosamine kinase; Uae1; N-acylmannosamine kinase; UDP-GlcNAc-2-epimerase/ManAc kinase; UDP-N-acetylglucosamine 2-epimerase/N-acetylmannosamine kinase; UDP-N-acetylglucosamine-2-epimerase/N-acetylmannosamine kinase; NM; DMRV; IBM2; GLCNE;

Gene ID [10020](#)

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

mRNA Refseq	NM_001128227
Protein Refseq	NP_001121699
MIM	603824
UniProt ID	Q9Y223
Chromosome Location	9p13.1
Pathway	Amino sugar and nucleotide sugar metabolism, organism-specific biosystem; Amino sugar and nucleotide sugar metabolism, conserved biosystem; CMP-N-acetylneuraminate biosynthesis I (eukaryotes), organism-specific biosystem; Metabolic pathways, organism-specific biosystem;
Function	ATP binding; N-acylmannosamine kinase activity; UDP-N-acetylglucosamine 2-epimerase activity; isomerase activity; kinase activity; nucleotide binding; transferase activity;

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA