10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GNE Antibody (N-term) Blocking peptide

Synthetic peptide
Catalog # BP12285a

Specification

GNE Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q9Y223

GNE Antibody (N-term) Blocking peptide - Additional Information

Gene ID 10020

Other Names
Bifunctional UDP-N-acetylglucosamine 2-epimerase/N-acetylmannosamine kinase, UDP-GlcNAc-2-epimerase/ManAc kinase, UDP-N-acetylglucosamine 2-epimerase (hydrolyzing), UDP-GlcNAc-2-epimerase, Uridine diphosphate-N-acetylglucosamine-2-epimerase, N-acetylmannosamine kinase, ManAc kinase, GNE, GLCNE

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GNE Antibody (N-term) Blocking peptide - Protein Information

Name GNE (HGNC:23657)

Function
Bifunctional enzyme that possesses both UDP-N- acetylglucosamine 2-epimerase and N-acetylmannosamine kinase activities, and serves as the initiator of the biosynthetic pathway leading to the production of N-acetylneuraminic acid (NeuAc), a critical precursor in the synthesis of sialic acids. By catalyzing this pivotal and rate-limiting step in sialic acid biosynthesis, this enzyme assumes a pivotal role in governing the regulation of cell surface sialylation, playing a role in embryonic angiogenesis (PubMed:10334995, PubMed:11326336, PubMed:14707127, PubMed:16503651, PubMed:2808337, PubMed:38237079). Sialic acids represent a category of negatively charged sugars that reside on the surface of cells as terminal components of glycoconjugates and mediate important functions in various cellular processes, including cell adhesion, signal transduction, and cellular recognition (PubMed:<a href="http://www.uniprot.org/citations/10334995"

target="_blank">10334995, PubMed:14707127).

Cellular Location
Cytoplasm, cytosol {ECO:0000250|UniProtKB:O35826}

Tissue Location
Highest expression in liver and placenta. Also found in heart, brain, lung, kidney, skeletal muscle and pancreas Isoform 1 is expressed in heart, brain, kidney, liver, placenta, lung, spleen, pancreas, skeletal muscle and colon. Isoform 2 is expressed mainly in placenta, but also in brain, kidney, liver, lung, pancreas and colon. Isoform 3 is expressed at low level in kidney, liver, placenta and colon.

GNE Antibody (N-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

GNE Antibody (N-term) Blocking peptide - Images

GNE Antibody (N-term) Blocking peptide - Background

The protein encoded by this gene is a bifunctional enzymethat initiates and regulates the biosynthesis of N-acetylneuraminicacid (NeuAc), a precursor of sialic acids. It is a rate-limitingenzyme in the sialic acid biosynthetic pathway. Sialic acidmodification of cell surface molecules is crucial for theirfunction in many biologic processes, including cell adhesion andsignal transduction. Differential sialylation of cell surfacemolecules is also implicated in the tumorigenicity and metastaticbehavior of malignant cells. Mutations in this gene are associatedwith sialuria, autosomal recessive inclusion body myopathy, andNonaka myopathy. Alternative splicing of this gene results intranscript variants encoding different isoforms. [provided byRefSeq].

GNE Antibody (N-term) Blocking peptide - References

Stober, A., et al. Neuromuscul. Disord. 20(5):335-336(2010)Reinke, S.O., et al. Glycoconj. J. 26(4):415-422(2009)Tong, Y., et al. PLoS ONE 4 (10), E7165 (2009) :Reinke, S.O., et al. FEBS Lett. 581(17):3327-3331(2007)Watts, G.D., et al. Neuromuscul. Disord. 13 (7-8), 559-567 (2003) :