

GNE Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP5318b**Specification**

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

Primary Accession [O9Y223](#)
Other Accession [NP_005467.1](#)

GNE Antibody (C-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 (C-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 (PubMed:2808337, PubMed:10334995, PubMed:11326336, PubMed:14707127, PubMed:16503651). 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: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 (C-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

GNE Antibody (C-term) Blocking peptide - Images**GNE Antibody (C-term) Blocking peptide - Background**

GNE is a bifunctional enzyme that initiates and regulates the biosynthesis of N-acetylneuraminic acid (NeuAc), a precursor of sialic acids. It is a rate-limiting enzyme in the sialic acid biosynthetic pathway. Sialic acid modification of cell surface molecules is crucial for their function in many biologic processes, including cell adhesion and signal transduction. Differential sialylation of cell surface molecules is also implicated in the tumorigenicity and metastatic behavior of malignant cells.

GNE Antibody (C-term) Blocking peptide - References

Reinke, S.O., et al. Glycoconj. J. 26(4):415-422(2009) Tong, Y., et al. PLoS ONE 4 (10), E7165 (2009)
Klootwijk, R.D., et al. FASEB J. 22(11):3846-3852(2008)