

GNE Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50603**Specification**

GNE Antibody - Product Information

Application	WB, IHC
Primary Accession	O9Y223
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	79,83,79,71,67 KDa
Antigen Region	600-629

GNE Antibody - 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

Dilution

WB~~ 1:500

IHC~~1:50-1:100

Format

Rabbit IgG in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.

Storage Conditions

-20°C

GNE Antibody - 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)

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

Cellular Location

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

Tissue Location

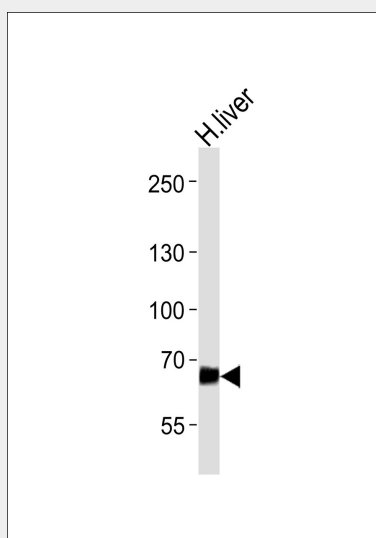
Highest expression in liver and placenta. Also found in heart, brain, lung, kidney, skeletal muscle and pancreas Isoform 1 is expressed in heart, brain, kidney, liver, placenta, lung, spleen, pancreas, skeletal muscle and colon. Isoform 2 is expressed mainly in placenta, but also in brain, kidney, liver,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

GNE Antibody - Protocols

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

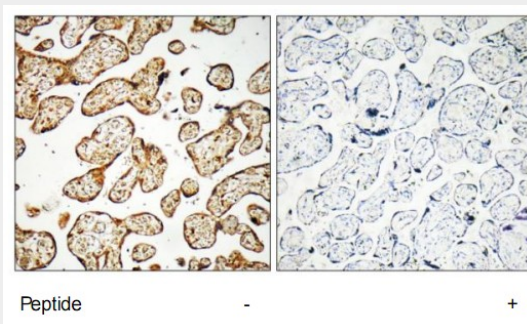
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GNE Antibody - Images



Western blot analysis of lysate from human liver tissue lysate, using GNE Antibody (AP50603). AP50603 was diluted at 1:500. A goat anti-rabbit IgG H&L (HRP) at 1:5000 dilution was used as the

secondary antibody. Lysate at 35ug.



Immunohistochemistry analysis of paraffin-embedded human placenta tissue, using GNE antibody.

GNE Antibody - Background

Regulates and initiates biosynthesis of N- acetylneuraminic acid (NeuAc), a precursor of sialic acids. Plays an essential role in early development (By similarity). Required for normal sialylation in hematopoietic cells. Sialylation is implicated in cell adhesion, signal transduction, tumorigenicity and metastatic behavior of malignant cells.

GNE Antibody - References

Lucka L., et al. FEBS Lett. 454:341-344(1999).
Seppala R., et al. Am. J. Hum. Genet. 64:1563-1569(1999).
Wang S.S., et al. Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
Huizing M., et al. Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases.
Pramono Z.A.D., et al. Submitted (AUG-2007) to the EMBL/GenBank/DDBJ databases.