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

Specification

GNE Antibody - Product Information

Application	**WB, IHC**
Primary Accession	Q9Y223
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℃

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 (PubMed:2808337, PubMed:10334995, PubMed:11326336, PubMed:<a

href="http://www.uniprot.org/citations/14707127" target="_blank">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}

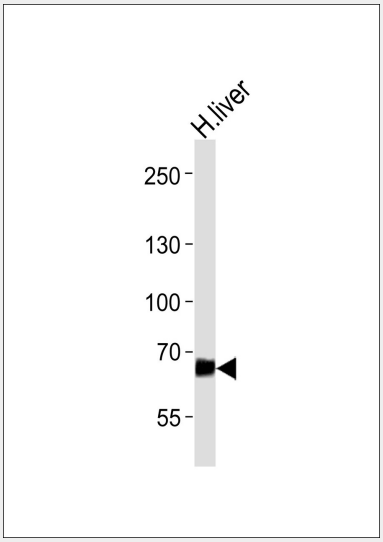
Tissue Location
Highest expression in liver and placenta. Also found in heart, brain, lung, kidney, skeletal muscle and pancreas Isoform 1 is expressed in heart, brain, kidney, liver, placenta, lung, spleen, pancreas, skeletal muscle and colon. Isoform 2 is expressed mainly in placenta, but also in brain,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

GNE Antibody - Protocols

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

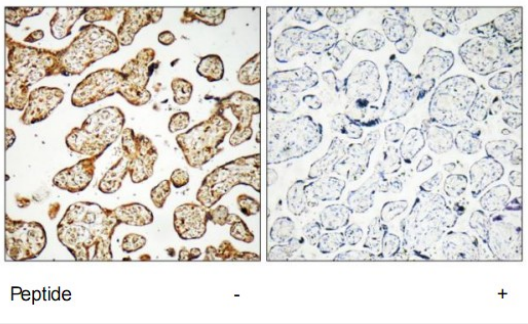
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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.

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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.