

**GNE Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP5318B**

**Specification**

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**GNE Antibody (C-term) - Product Information**

Application	FC, WB,E
Primary Accession	<a href="#">O9Y223</a>
Other Accession	<a href="#">O35826</a> , <a href="#">O91WG8</a> , <a href="#">O7TQ49</a> , <a href="#">NP_005467.1</a>
Reactivity	Human, Mouse
Predicted	Hamster, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	79275
Antigen Region	580-607

**GNE Antibody (C-term) - 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

**Target/Specificity**

This GNE antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 580-607 amino acids from the C-terminal region of human GNE.

**Dilution**

FC~~1:10~50

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

GNE Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**GNE Antibody (C-term) - 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:[10334995](#), PubMed:[14707127](#)).

**Cellular Location**

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

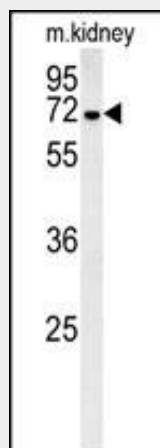
**Tissue Location**

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) - Protocols**

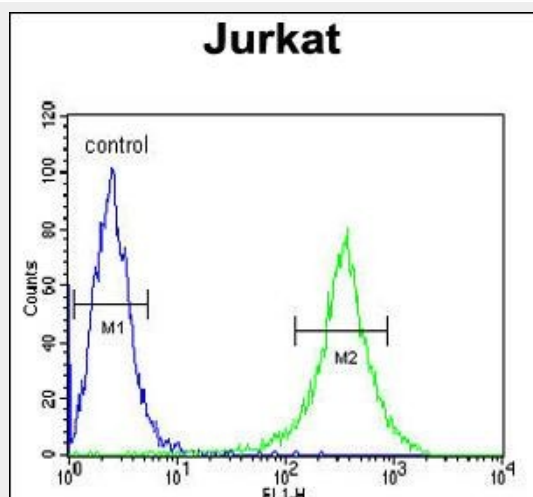
Provided below are standard protocols that you may find useful for product applications.

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

**GNE Antibody (C-term) - Images**

GNE Antibody (C-term) (Cat. #AP5318b) western blot analysis in mouse kidney tissue lysates

(35ug/lane). This demonstrates the GNE antibody detected GNE protein (arrow).



GNE Antibody (C-term) (Cat. #AP5318b) flow cytometric analysis of Jurkat cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

#### **GNE Antibody (C-term) - 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) - 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)