

### **GLCNE Polyclonal Antibody**

Catalog # AP70096

#### **Specification**

### **GLCNE Polyclonal Antibody - Product Information**

Application WB, IHC-P Primary Accession Q9Y223

Reactivity Human, Mouse, Rat

Host Rabbit Clonality Polyclonal

### **GLCNE Polyclonal Antibody - Additional Information**

Gene ID 10020

#### **Other Names**

GNE; GLCNE; Bifunctional UDP-N-acetylglucosamine 2-epimerase/N-acetylmannosamine kinase; UDP-GlcNAc-2-epimerase/ManAc kinase

#### Dilution

WB $\sim\sim$ Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications.

IHC-P~~N/A

#### **Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

## **Storage Conditions**

-20°C

### **GLCNE Polyclonal 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:<a href="http://www.uniprot.org/citations/10334995" target="\_blank">10334995</a>, PubMed:<a href="http://www.uniprot.org/citations/11326336" target="\_blank">11326336</a>, PubMed:<a href="http://www.uniprot.org/citations/14707127" target="\_blank">14707127</a>, PubMed:<a href="http://www.uniprot.org/citations/16503651" target="\_blank">16503651</a>, PubMed:<a href="http://www.uniprot.org/citations/2808337" target="\_blank">2808337</a>, PubMed:<a href="http://www.uniprot.org/citations/38237079" target="\_blank">38237079</a>, PubMed:<a href="http://www.uniprot.org/citations/38237079" target="\_blank">38237079</a>). 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</a>, PubMed: <a href="http://www.uniprot.org/citations/14707127" target="\_blank">14707127</a>).

#### **Cellular Location**

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

#### **Tissue Location**

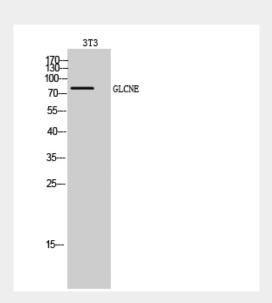
Highest expression in liver and placenta. Also found in heart, brain, lung, kidney, skeletal muscle and pancreas Isoform 1 is expressed in heart, brain, kidney, liver, placenta, lung, spleen, pancreas, skeletal muscle and colon. Isoform 2 is expressed mainly in placenta, but also in brain, kidney, liver,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

### **GLCNE Polyclonal Antibody - Protocols**

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

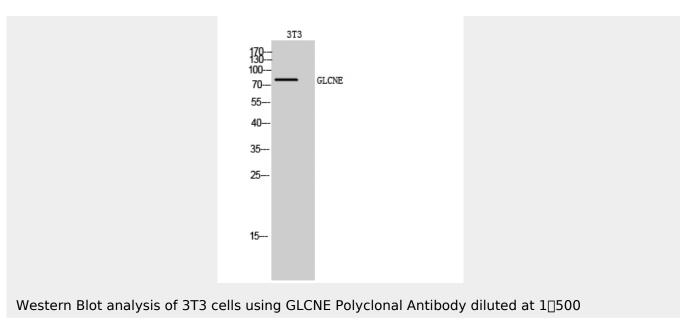
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

### **GLCNE Polyclonal Antibody - Images**



Western Blot analysis of 3T3 cells using GLCNE Polyclonal Antibody diluted at 1∏500





# **GLCNE Polyclonal 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.