10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# GNE Rabbit mAb

Catalog # AP75491

## Product Information

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| **Application** | WB, IP |
| **Primary Accession** | Q9Y223 |
| **Reactivity** | Rat, Human |
| **Host** | Rabbit |
| **Clonality** | Monoclonal Antibody |
| **Isotype** | IgG |
| **Conjugate** | Unconjugated |
| **Purification** | Affinity Purified |
| **Calculated MW** | 79275 |

## Additional Information

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| **Gene ID** | 10020 |
| **Other Names** | GNE |
| **Dilution** | WB~~1:500-1:1000 IP~~1:20 |
| **Format** | Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA. |
| **Storage** | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

## Protein Information

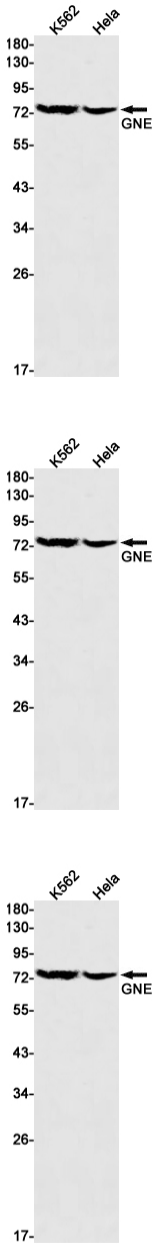
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| **Name** | GNE ( HGNC:23657) |
| **Function** | Bifunctional enzyme that possesses both UDP-N- acetylglucosamine 2-epimerase and N-acetylmannosamine kinase activities, and serves as the initiator of the biosynthetic pathway leading to the production 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). |

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| **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. |

## Background

The bifunctional enzyme UDP-N-acetylglucosamine-2-epimerase/N-acetylmannosamine kinase (GNE) is essential for early embryonic development and catalyzes the rate limiting step in sialic acid biosynthesis. It plays an important role in neuronal cell and brain development, and is strongly involved in cardiac tissue and skeletal muscle early survival and organization. . This protein has 5 isoforms produced by alternative splicing.

## Images




Western blot analysis of GNE in K562, Hela lysates using GNE antibody.

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