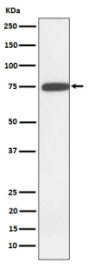
GNE Antibody / Glucosamine 6 phosphate N acetyltransferase [clone 29G96] (FY12350)

Catalog No.	Formulation	Size
FY12350	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	29G96
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q9Y223
Applications	Western blot: 1:500-1:2000 Immunocytochemistry/Immunofluorescence: 1:50-1:200
Limitations	This GNE antibody is available for research use only.



Western blot analysis of GNE expression in K562 cell lysate using GNE antibody. Predicted molecular weight: 67-83 kDa (multiple isoforms).

Description

GNE antibody is designed to detect glucosamine 6 phosphate N acetyltransferase, a bifunctional enzyme involved in

sialic acid biosynthesis. The GNE protein contains two enzymatic activities, UDP N acetylglucosamine 2 epimerase and N acetylmannosamine kinase. Together, these activities catalyze the first committed steps in the biosynthesis of N acetylneuraminic acid, the most common form of sialic acid in mammals. Sialic acids are critical components of glycoproteins and glycolipids, influencing cell surface interactions, receptor function, and immune regulation.

GNE antibody is widely applied in metabolic, developmental, and neuromuscular research. Mutations in the GNE gene cause GNE myopathy, also known as hereditary inclusion body myopathy. This rare autosomal recessive disorder is characterized by progressive muscle weakness and degeneration. By using GNE antibody, researchers can investigate enzyme expression levels and localization to better understand the molecular basis of this disease.

The antibody is suitable for western blotting, immunohistochemistry, and immunofluorescence. In western blot assays, GNE antibody specifically recognizes the protein across tissue samples, confirming its role in metabolic pathways. Immunohistochemistry highlights expression in muscle and epithelial tissues, while immunofluorescence demonstrates cytoplasmic localization within cultured cells. These approaches provide valuable insight into how GNE supports cellular glycosylation and metabolic balance.

In addition to its relevance in genetic disorders, GNE is important in cancer biology and immunology. Altered sialylation patterns are a hallmark of many cancers, where increased sialic acid residues on tumor cells promote immune evasion and metastasis. By monitoring GNE expression with specific antibodies, scientists can explore how dysregulation of sialic acid biosynthesis contributes to malignant transformation. Similarly, in immunology, GNE activity influences immune recognition, inflammation, and infection responses.

Sialic acids play essential roles in development and signaling. Disruption of GNE function affects not only muscle tissue but also systemic processes, highlighting the importance of reliable antibodies for detection. Using GNE antibody, researchers can explore how this key enzyme contributes to glycosylation pathways and how alterations affect health and disease.

GNE antibody offered by NSJ Bioreagents provides a dependable reagent for studying sialic acid biosynthesis, hereditary myopathy, and glycosylation related disorders. Its proven specificity ensures accurate detection across multiple experimental methods, supporting both basic and translational research.

Application Notes

Optimal dilution of the GNE antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human GNE was used as the immunogen for the GNE antibody.

Storage

Store the GNE antibody at -20oC.

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