abcam

# Product datasheet

# Anti-GNE antibody [EPR15058] ab184963

Recombinant RabMAb

3 Images

## Overview

| | |
|---|---|
| **Product name** | Anti-GNE antibody [EPR15058] |
| **Description** | Rabbit monoclonal [EPR15058] to GNE |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** Flow Cyt, WB |
| **Species reactivity** | **Reacts with:** Mouse, Rat, Human |
| **Immunogen** | Synthetic peptide within Human GNE aa 50-150. The exact sequence is proprietary.<br>Database link: Q9Y223 |
| **Positive control** | Human placenta, fetal liver and SW480 lysates; HeLa cells. |
| **General notes** | This product was previously labelled as GLCNE<br><br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents.<br><br>This product is a recombinant rabbit monoclonal antibody. |

## Properties

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle. |
| **Storage buffer** | Preservative: 0.01% Sodium azide<br>Constituents: 0.05% BSA, 40% Glycerol, 59% PBS |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EPR15058 |
| **Isotype** | IgG |

## Applications

Our Abpromise guarantee covers the use of **ab184963** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| Flow Cyt | | 1/100.<br>ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |
| WB | | 1/10000 - 1/50000. Detects a band of approximately 75 kDa (predicted molecular weight: 79 kDa). |

## Target

**Function**

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.

**Tissue specificity**

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.

**Pathway**

Amino-sugar metabolism; N-acetylneuraminate biosynthesis.

**Involvement in disease**

Defects in GNE are a cause of sialuria (SIALURIA) [MIM:269921]; also known as sialuria French type. In sialuria, free sialic acid accumulates in the cytoplasm and gram quantities of neuraminic acid are secreted in the urine. The metabolic defect involves lack of feedback inhibition of UDP-GlcNAc 2-epimerase by CMP-Neu5Ac, resulting in constitutive overproduction of free Neu5Ac. Clinical features include variable degrees of developmental delay, coarse facial features and hepatomegaly. Sialuria inheritance is autosomal dominant.
Defects in GNE are the cause of inclusion body myopathy type 2 (IBM2) [MIM:600737]. Hereditary inclusion body myopathies are a group of neuromuscular disorders characterized by adult onset, slowly progressive distal and proximal weakness and a typical muscle pathology including rimmed vacuoles and filamentous inclusions. IBM2 is an autosomal recessive disorder affecting mainly leg muscles, but with an unusual distribution that spares the quadriceps as also observed in Nonaka myopathy.
Defects in GNE are the cause of Nonaka myopathy (NM) [MIM:605820]; also known as distal myopathy with rimmed vacuoles (DMRV). NM is an autosomal recessive muscular disorder, allelic to inclusion body myopathy 2. It is characterized by weakness of the anterior compartment of the lower limbs with onset in early adulthood, and sparing of the quadriceps muscles. As the inclusion body myopathy, NM is histologically characterized by the presence of numerous rimmed vacuoles without inflammatory changes in muscle specimens.

**Sequence similarities**

In the N-terminal section; belongs to the UDP-N-acetylglucosamine 2-epimerase family.
In the C-terminal section; belongs to the ROK (NagC/XylR) family.

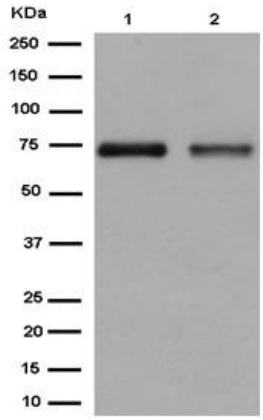
**Post-translational modifications**

Phosphorylated by PKC.

**Cellular localization**

Cytoplasm.

## Images




Western blot - Anti-GNE antibody [EPR15058] (ab184963)

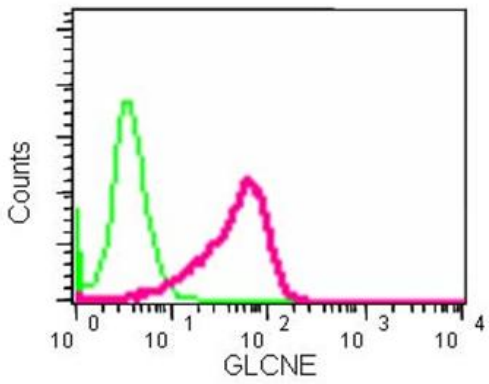
**All lanes :** Anti-GNE antibody [EPR15058] (ab184963) at 1/10000 dilution

**Lane 1 :** Human fetal liver lysate
**Lane 2 :** Human placenta lysate

Lysates/proteins at 20 µg per lane.

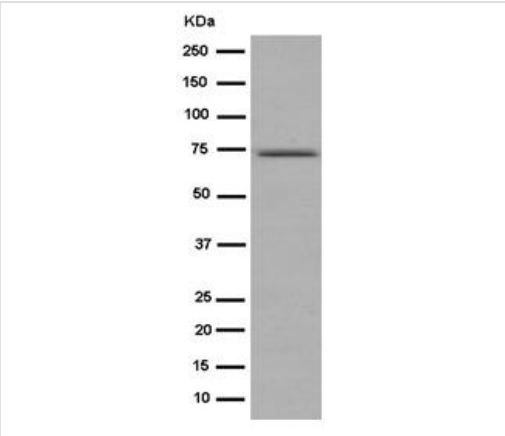
**Secondary**
**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

**Predicted band size:** 79 kDa




Flow Cytometry - Anti-GNE antibody [EPR15058] (ab184963)

Flow cytometric analysis of HeLa cells (2% paraformaldehyde-fixed) labeling GNE with ab184963 at 1/100 dilution (red) or a Rabbit monoclonal IgG (negative) (green) followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.




Western blot - Anti-GNE antibody [EPR15058] (ab184963)

Anti-GNE antibody [EPR15058] (ab184963) at 1/20000 dilution + SW480 lysate at 10 µg

**Secondary**

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

**Predicted band size:** 79 kDa



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