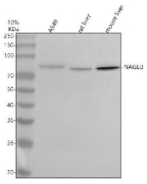
NAGLU Antibody / Alpha-N-acetylglucosaminidase (FY12863)

Catalog No.	Formulation	Size
FY12863	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P54802
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This NAGLU antibody is available for research use only.



Western blot analysis of NAGLU using anti-NAGLU antibody. Lane 1: human whole cell lysates, Lane 2: rat liver tissue lysates, Lane 3: mouse liver tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NAGLU antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A specific band was detected for NAGLU at approximately 82 kDa. The expected molecular weight of NAGLU is ~82 kDa.

Description

NAGLU antibody detects Alpha-N-acetylglucosaminidase, a lysosomal enzyme responsible for the degradation of heparan sulfate. Encoded by the NAGLU gene on chromosome 17q21.2, this hydrolase catalyzes the removal of N-acetylglucosamine residues from the non-reducing ends of heparan sulfate chains, playing a critical role in glycosaminoglycan catabolism. Proper function of NAGLU is essential for maintaining lysosomal homeostasis and

preventing the accumulation of undegraded substrates.

NAGLU is synthesized as a preproenzyme that undergoes proteolytic processing in the endoplasmic reticulum and Golgi before trafficking to lysosomes. The mature enzyme is approximately 83 kilodaltons and operates optimally at acidic pH. It functions in concert with other lysosomal hydrolases to complete stepwise degradation of heparan sulfate, ensuring normal turnover of extracellular matrix components and cell-surface proteoglycans.

The NAGLU antibody is widely used in enzymology, lysosomal biology, and metabolic disease research to study glycosaminoglycan metabolism, lysosomal trafficking, and enzyme replacement mechanisms. Western blot analysis identifies a band corresponding to the mature lysosomal form of NAGLU, while immunofluorescence shows vesicular staining overlapping with lysosomal markers such as LAMP1. This antibody enables precise detection of enzyme localization and expression changes in normal and diseased tissues.

Mutations in NAGLU cause mucopolysaccharidosis type IIIB (MPS IIIB), also known as Sanfilippo syndrome type B, a lysosomal storage disorder characterized by progressive neurodegeneration and systemic accumulation of heparan sulfate. The NAGLU antibody is a valuable tool for diagnosing and modeling this disease, assessing enzyme replacement efficacy, and monitoring lysosomal function in gene therapy studies. NSJ Bioreagents provides this antibody validated for its applications, ensuring high sensitivity for lysosomal and metabolic research.

Application Notes

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

Immunogen

E.coli-derived human NAGLU recombinant protein (Position: D24-D489) was used as the immunogen for the NAGLU antibody.

Storage

After reconstitution, the NAGLU antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.