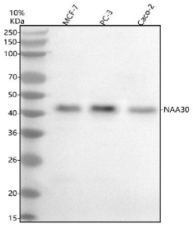
NAA30 Antibody / N-alpha-acetyltransferase 30 / NAT12 (FY12961)

Catalog No.	Formulation	Size
FY12961	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
Format	Lyophilized
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	Q147X3
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This NAA30 antibody is available for research use only.



Western blot analysis of NAT12/NAA30 using anti-NAA30 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human MCF-7 whole cell lysates, Lane 2: human PC-3 whole cell lysates, Lane 3: human Caco-2 whole cell 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-NAA30 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 an ECL Plus Western Blotting Substrate. The predicted molecular weight of NAT12/NAA30 is at ~39 kDa.

Description

NAA30 antibody detects N-alpha-acetyltransferase 30, also known as N-acetyltransferase 12 (NAT12), an enzyme responsible for N-terminal acetylation of nascent proteins. The UniProt recommended name is N-alpha-acetyltransferase 30 (NAA30). This enzyme is a catalytic component of the NatC N-terminal acetyltransferase complex, which transfers an acetyl group from acetyl-CoA to the alpha-amino group of specific target proteins. N-terminal acetylation is among the

most common protein modifications in eukaryotes, influencing protein stability, localization, and complex formation.

Functionally, NAA30 antibody identifies a 362-amino-acid enzyme that acetylates proteins beginning with methionine followed by a hydrophobic residue, such as leucine, isoleucine, or phenylalanine. This modification often occurs co-translationally as nascent polypeptides emerge from the ribosome. NAA30 partners with auxiliary subunits NAA35 and NAA38 to form the NatC complex, ensuring substrate specificity and interaction with the ribosomal surface. Through this mechanism, NAA30 regulates key cellular processes including mitochondrial targeting, vesicular trafficking, and protein degradation.

The NAA30 gene is located on chromosome 3p21.31 and encodes an enzyme localized predominantly in the cytosol and on the cytoplasmic face of the endoplasmic reticulum. It exhibits acetyltransferase activity dependent on acetyl-CoA availability, linking its function to cellular metabolism. N-terminal acetylation catalyzed by NAA30 prevents degradation of proteins by shielding the N-terminus from ubiquitin-mediated turnover. Many NatC substrates are involved in vesicular transport, actin organization, and Golgi maintenance.

Dysregulation of NAA30 has been associated with several diseases. Loss of function leads to impaired mitochondrial integrity and developmental abnormalities. In cancer, altered NAA30 expression influences cell proliferation and apoptosis through acetylation of proteins that regulate the cell cycle and cytoskeleton. The enzyme also plays a role in stress adaptation by stabilizing proteins involved in autophagy and oxidative defense. Experimental depletion of NAA30 reduces acetylation of key regulators such as Arl3 and Grh12, leading to defects in vesicle trafficking and Golgi structure.

NAA30 antibody is commonly used in protein biochemistry and molecular biology to examine acetyltransferase complex assembly, post-translational modification, and protein maturation. It supports applications in western blotting, immunocytochemistry, and enzyme activity assays to track NatC complex localization and expression. Because NAA30 acts early during protein synthesis, it is essential for maintaining the acetylation balance that governs protein lifespan and signaling dynamics.

Structurally, NAA30 contains a conserved acetyltransferase domain that binds acetyl-CoA and donor substrates. Mutational analysis has identified residues critical for catalysis and substrate recognition. NSJ Bioreagents provides NAA30 antibody reagents validated for use in research exploring protein modification, acetylation regulation, and proteostasis.

Application Notes

Optimal dilution of the NAA30 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NAT12/NAA30 recombinant protein (Position: H69-R362) was used as the immunogen for the NAA30 antibody.

Storage

After reconstitution, the NAA30 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.