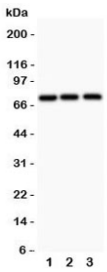
APLP1 Antibody / N-Terminal APLP1 Polyclonal Antibody (R31208)

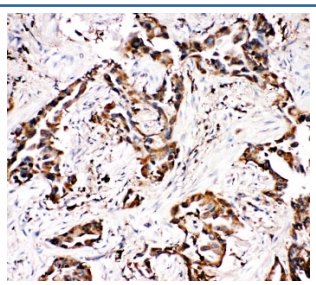
Catalog No.	Formulation	Size
R31208	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

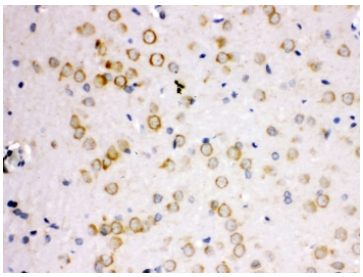
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide/thimerosal
UniProt	P51693
Localization	Cytoplasmic, membrane
Applications	Western blot: 0.5-1ug/ml IHC (FFPE): 0.5-1ug/ml
Limitations	This APLP1 Antibody / N-Terminal APLP1 Polyclonal Antibody is available for research use only.



APLP1 Antibody by WB in Human, Rat and Mouse Cell Lysates. Western blot analysis of human HeLa (lane 1), rat PC-12 (lane 2), and mouse HEPA1-6 (lane 3) cell lysates using N-Terminal APLP1 Polyclonal Antibody. A prominent band is detected at approximately 86 kDa in all three samples. The predicted molecular weight of unmodified APLP1 is approximately 76 kDa, while glycosylated forms can migrate near 86 kDa and mature forms have been reported at approximately 92-95 kDa.



APLP1 Antibody by IHC in Human Lung Carcinoma. Immunohistochemical staining of FFPE human lung carcinoma tissue using N-Terminal APLP1 Polyclonal Antibody. Brown immunoreactivity is observed in tumor cells, with staining distributed across cytoplasmic and membrane-associated regions. Nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by steaming tissue sections in citrate buffer at pH 6.0 for 20 minutes.



APLP1 Antibody by IHC in Rat Brain. Immunohistochemical staining of FFPE rat brain tissue using N-Terminal APLP1 Polyclonal Antibody. Brown immunoreactivity is observed in neuronal cell bodies and surrounding cellular processes, consistent with the predominantly neuronal expression of APLP1. Nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by steaming tissue sections in citrate buffer at pH 6.0 for 20 minutes.

Description

APLP1 Antibody / N-Terminal APLP1 Polyclonal Antibody targets amyloid beta precursor-like protein 1, a membrane-associated glycoprotein belonging to the amyloid precursor protein family. Encoded by the APLP1 gene on chromosome 19, this protein shares structural and functional similarities with amyloid precursor protein (APP) and amyloid precursor-like protein 2 (APLP2). APLP1 is predominantly expressed in the nervous system, where it contributes to neuronal development, synaptic organization, and cell-cell interactions. Its enrichment at neuronal membranes and synaptic compartments suggests an important role in maintaining communication between neurons.

APLP1 is a type I transmembrane protein containing a large extracellular region, a single transmembrane domain, and a short intracellular C-terminal region. The extracellular portion contains conserved domains involved in protein interactions and cellular adhesion. APLP1 can participate in homophilic interactions between neighboring cells, supporting its proposed function in neuronal adhesion and synaptic connectivity. These interactions may contribute to the formation and stabilization of neuronal contacts during nervous system development and synaptic maturation.

Like other members of the APP family, APLP1 undergoes proteolytic processing that generates soluble extracellular fragments and membrane-associated cleavage products. Ectodomain shedding can be mediated by secretase enzymes, while subsequent intramembrane cleavage releases additional fragments. Unlike APP, APLP1 does not contain the amyloid-beta sequence responsible for generating the characteristic amyloid-beta peptides associated with Alzheimer's disease. Nevertheless, shared processing mechanisms and overlapping biological functions make APLP1 relevant to investigations of APP family signaling and neuronal protein metabolism.

APLP1 has also been implicated in synaptic vesicle organization, neurite development, and interactions involving intracellular adaptor proteins. Its cytoplasmic region contains conserved motifs that participate in protein trafficking and signaling complexes. Functional redundancy among APP family members can complicate the interpretation of individual protein loss, while combined genetic deficiencies have revealed important contributions to nervous system development and neuronal viability. These findings suggest that APLP1 participates in a broader network of proteins responsible for maintaining neuronal structure and function.

Research into APLP1 continues to examine its contributions to synaptic physiology, neuronal adhesion, and the regulation of APP family proteins. Its extensive post-translational processing and glycosylation also make it relevant to studies of membrane protein maturation and intracellular trafficking. NSJ Bioreagents offers this APLP1 Antibody for investigating the expression and biological functions of this neuronal glycoprotein.

Explore our Neuroscience Antibodies for additional research tools targeting proteins involved in neuronal development, synaptic organization, and cell signaling.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the APLP1 Antibody / N-Terminal APLP1 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids 101-120 from human Amyloid-precursor-like protein 1 (ELQIARVEQATQAIPMERWC) were used as the

immunogen for this APLP1 antibody.

Storage

After reconstitution, the APLP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Amyloid Precursor-Like Protein 1 antibody, Amyloid Beta Precursor-Like Protein 1 antibody, APP-Like Protein 1 antibody

References (1)

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