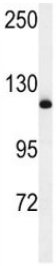
NEDD4 Antibody / E3 Ubiquitin Ligase Antibody (F52006)

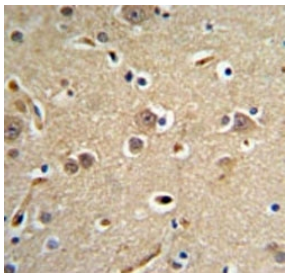
Catalog No.	Formulation	Size
F52006-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F52006-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

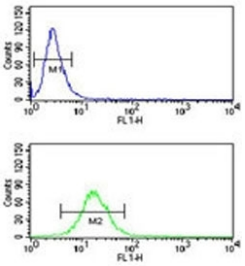
Availability	1-3 business days
Species Reactivity	Human, Mouse
Predicted Reactivity	Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P46934
Applications	Western Blot : 1:1000 IHC (Paraffin) : 1:50-1:100 Flow Cytometry : 1:10-1:50
Limitations	This NEDD4 Antibody / E3 Ubiquitin Ligase Antibody is available for research use only.



NEDD4 Antibody Mouse Cell Lysate Western Blot Detection. Western blot analysis of Neural precursor cell expressed developmentally down-regulated protein 4 / NEDD4 in mouse NIH3T3 cell lysate using NEDD4 Antibody for WB. A band is detected at approximately 140-150 kDa, consistent with the predicted molecular weight of NEDD4, with potential lower molecular weight signal near ~95 kDa that may represent a cleavage product or processed isoform. The banding pattern is consistent with reported NEDD4 expression and proteolytic processing observed in mammalian cells.



NEDD4 Antibody Human Brain IHC Neuronal Expression. Immunohistochemistry analysis of Neural precursor cell expressed developmentally down-regulated protein 4 / NEDD4 in FFPE human brain tissue using NEDD4 Antibody for IHC. HRP-DAB brown chromogenic staining demonstrates cytoplasmic localization in neuronal cell bodies with scattered distribution throughout the tissue, while surrounding neuropil shows lighter background signal. The staining pattern supports neuronal expression of NEDD4 within human brain tissue architecture.



NEDD4 antibody flow cytometric analysis of NCI-H460 cells (green) compared to a negative control (blue). FITC-conjugated goat-anti-rabbit secondary Ab was used for the analysis.

Description

NEDD4 Antibody detects Neural precursor cell expressed developmentally down-regulated protein 4 (NEDD4), a key E3 ubiquitin ligase that regulates protein stability, signaling pathways, and membrane protein turnover. As a member of the HECT-type ubiquitin ligase family, NEDD4 catalyzes the covalent attachment of ubiquitin to substrate proteins, directing them toward degradation, recycling, or functional modification. This activity positions NEDD4 as a central regulator of protein homeostasis and intracellular signaling networks. A NEDD4 Antibody is widely used in research focused on ubiquitination, proteostasis, and signal transduction.

NEDD4 antibody, also referred to as Nedd4 antibody and E3 ubiquitin protein ligase NEDD4 antibody in the literature, recognizes a multidomain enzyme containing WW domains that mediate substrate recognition and a catalytic HECT domain that enables direct ubiquitin transfer. Through these structural features, NEDD4 interacts with a wide range of proteins, including membrane receptors, ion channels, and adaptor proteins. This allows NEDD4 to control receptor internalization, endocytic trafficking, and downstream signaling pathways that regulate cellular responses to environmental cues.

Functionally, NEDD4 plays a critical role in regulating membrane protein turnover and endocytic sorting. By ubiquitinating target proteins, it directs them to lysosomal degradation pathways or recycling compartments, thereby controlling cell surface receptor levels and signal duration. NEDD4 is also involved in modulation of growth factor signaling, ion transport regulation, and stress response pathways. These activities make it a key integrator of signaling networks that coordinate cell growth, differentiation, and survival.

In addition to its role in normal cellular regulation, NEDD4 has been implicated in disease-associated processes, particularly in cancer and metabolic dysregulation. Altered NEDD4 expression or activity can lead to abnormal protein accumulation or degradation, disrupting signaling pathways that control proliferation and cellular homeostasis. Because NEDD4 operates at the level of protein stability and signaling control, it represents an important node in ubiquitin-dependent regulatory systems. Detection of NEDD4 using a NEDD4 Antibody supports investigation of these pathways and enables detailed study of ubiquitin-mediated mechanisms governing protein regulation and cellular function.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Titration of the NEDD4 Antibody / E3 Ubiquitin Ligase Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 1288-1319 from the human protein was used as the immunogen for this NEDD4 antibody.

Storage

Aliquot the NEDD4 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

NEDD4 antibody, Nedd4 antibody, Neural precursor cell expressed developmentally down-regulated 4 antibody, E3 ubiquitin protein ligase NEDD4 antibody