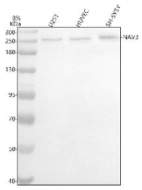
NAV3 Antibody / Neuron navigator 3 (FY12799)

Catalog No.	Formulation	Size
FY12799	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
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	Q8IVL0
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This NAV3 antibody is available for research use only.



Western blot analysis of NAV3 using anti-NAV3 antibody. Lane 1: human U251 whole cell lysates, Lane 2: human HUVEC whole cell lysates, Lane 3: human SH-SY5Y 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-NAV3 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 NAV3 at approximately 256 kDa. The expected molecular weight of NAV3 is ~256 kDa.

Description

NAV3 antibody detects Neuron navigator 3, a cytoskeletal-associated protein that regulates axon guidance, neuronal migration, and cytoskeletal organization. Encoded by the NAV3 gene on chromosome 12q21.2, this protein belongs to the neuron navigator family, which also includes NAV1 and NAV2, and is characterized by coiled-coil and calponin homology domains that facilitate interaction with microtubules and actin filaments. NAV3 plays a pivotal role in neuronal

development and guidance by stabilizing the cytoskeleton and modulating microtubule dynamics during axon extension.

NAV3 localizes primarily to neuronal growth cones and extending axons, where it influences the assembly and organization of cytoskeletal networks required for directional growth. It interacts with signaling molecules involved in cytoskeletal regulation, including Rho GTPases and kinases that modulate actin-microtubule coordination. Beyond its developmental roles, NAV3 contributes to cytoskeletal remodeling in mature neurons and glial cells, supporting plasticity and response to injury.

The NAV3 antibody is used in neuroscience and developmental biology research to study axon formation, neuronal polarity, and migration. Western blot analysis identifies a 250 kilodalton band corresponding to NAV3, while immunofluorescence reveals punctate and filamentous staining along axons and dendritic processes. This antibody enables detailed visualization of cytoskeletal organization and neuronal network formation.

Altered NAV3 expression is associated with neurodevelopmental disorders, epilepsy, and gliomas, where disrupted cytoskeletal control affects cell morphology and migration. Additionally, NAV3 has been linked to wound healing and skin differentiation, as its expression is upregulated during keratinocyte migration. The NAV3 antibody provides a robust tool for analyzing cytoskeletal guidance mechanisms and neuronal development. NSJ Bioreagents offers this antibody validated for its applications, ensuring reproducible performance in studies of neuronal and cytoskeletal regulation.

Application Notes

Optimal dilution of the NAV3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NAV3 recombinant protein (Position: K9-D1417) was used as the immunogen for the NAV3 antibody.

Storage

After reconstitution, the NAV3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.