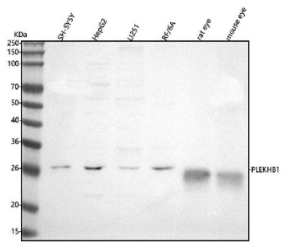
PLEKHB1 Antibody / Pleckstrin homology domain-containing family B member 1 (FY13370)

Catalog No.	Formulation	Size
FY13370	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, Monkey, 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	Q9UF11
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This PLEKHB1 antibody is available for research use only.



Western blot analysis of PLEKHB1 using anti-PLEKHB1 antibody. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: monkey RF/6A whole cell lysates, Lane 5: rat eye tissue lysates, Lane 6: mouse eye 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-PLEKHB1 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 PLEKHB1 at approximately 27 kDa. The expected molecular weight of PLEKHB1 is ~27 kDa.

Description

PLEKHB1 antibody detects Pleckstrin homology domain-containing family B member 1, a membrane-associated protein

encoded by the PLEKHB1 gene on chromosome 11p15.1. PLEKHB1 contains a pleckstrin homology (PH) domain and is involved in maintaining plasma membrane structure, vesicular trafficking, and cell signaling. It is expressed in the retina, brain, and epithelial tissues, where it contributes to cell polarity and intracellular transport. PLEKHB1 is particularly enriched in photoreceptor cells and neuronal synapses, supporting visual signal transmission and neuronal membrane organization.

Structurally, PLEKHB1 contains a conserved PH domain that binds phosphatidylinositol lipids, anchoring the protein to the inner leaflet of the plasma membrane. It also possesses regions that mediate protein-protein interactions with cytoskeletal and vesicular trafficking partners. PLEKHB1 belongs to the pleckstrin homology domain-containing protein family, which includes PLEKHB2, and participates in membrane dynamics and receptor recycling. Co-localization studies show PLEKHB1 distributed along synaptic membranes and photoreceptor outer segments.

Functionally, PLEKHB1 plays an important role in synaptic vesicle trafficking and receptor localization. In the retina, it interacts with proteins such as syntaxin and SNAP25 to regulate photoreceptor membrane stability and neurotransmitter release. In neurons, it supports axonal transport and signal transduction by organizing lipid domains within the plasma membrane. PLEKHB1 may also contribute to cellular polarity through coordination of phosphoinositide signaling at the membrane. During development, PLEKHB1 expression coincides with neural and retinal differentiation.

Dysregulation or mutation of PLEKHB1 has been linked to inherited retinal degenerations and neurological disorders. Its loss disrupts photoreceptor membrane architecture, leading to vision impairment. In cancer biology, PLEKHB1 expression patterns have been used as markers of epithelial polarity and tumor differentiation. Pathway associations include membrane trafficking, phosphatidylinositol signaling, and synaptic vesicle exocytosis. Co-localization with other PH domain proteins suggests a conserved role in regulating membrane-associated signaling complexes.

The PLEKHB1 antibody from NSJ Bioreagents is an excellent reagent for studies involving membrane organization, lipid signaling, and vesicular trafficking.

Application Notes

Optimal dilution of the PLEKHB1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PLEKHB1 recombinant protein (Position: H82-S214) was used as the immunogen for the PLEKHB1 antibody.

Storage

After reconstitution, the PLEKHB1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.