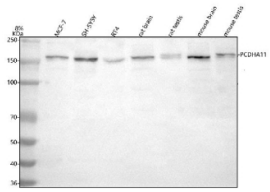
PCDHA11 Antibody / Protocadherin alpha 11 (FY12263)

Catalog No.	Formulation	Size
FY12263	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, 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	Q9Y5I1
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This PCDHA11 antibody is available for research use only.



Western blot analysis of PCDHA11 using anti-PCDHA11 antibody. Lane 1: human MCF-7 whole cell lysates, Lane 2: human SH-SY5Y whole cell lysates, Lane 3: human RT4 whole cell lysates, Lane 4: rat brain tissue lysates, Lane 5: rat testis tissue lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse testis 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-PCDHA11 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 PCDHA11 at approximately 150-170 kDa. The expected band size for PCDHA11 is at 103 and 88 kDa but may be observed at higher molecular weights due to glycosylation.

Description

PCDHA11 antibody detects Protocadherin alpha-11, encoded by the PCDHA11 gene on chromosome 5q31.3. PCDHA11

antibody is used in neuroscience and developmental biology, as PCDHA11 belongs to the protocadherin alpha gene cluster that encodes cadherin-like cell adhesion proteins. These molecules are highly expressed in the nervous system, where they contribute to neuronal diversity, connectivity, and synapse specification. The protocadherin cluster generates molecular diversity through combinatorial expression, enabling neurons to form specific connections.

Structurally, Protocadherin alpha-11 is a ~110 kDa type I transmembrane protein containing six extracellular cadherin repeats, a single-pass transmembrane domain, and a short cytoplasmic tail. The extracellular domains mediate calcium-dependent homophilic adhesion, while the cytoplasmic domain interacts with signaling molecules and cytoskeletal regulators. PCDHA11 is expressed predominantly in brain tissue, including cortex and hippocampus.

Functionally, PCDHA11 contributes to neuronal self-recognition and synapse formation. By expressing unique combinations of protocadherins, neurons establish cell-specific adhesion codes that guide connectivity. PCDHA11 also participates in dendritic arborization and neural circuit refinement. Researchers use PCDHA11 antibody to study neural adhesion, brain development, and synaptic patterning.

Clinically, protocadherins have been linked to neurodevelopmental disorders, epilepsy, and autism spectrum disorders. Altered expression or mutation of PCDHA11 may disrupt neuronal connectivity and contribute to cognitive dysfunction. Because protocadherins influence synaptic diversity, they are considered candidates for neurological disease biomarkers. NSJ Bioreagents offers PCDHA11 antibody for research in developmental neuroscience and neurogenetics.

Experimentally, PCDHA11 antibody is applied in western blotting to detect the ~110 kDa protein, in immunohistochemistry to visualize brain expression, and in immunofluorescence microscopy to examine synaptic localization. Co-immunoprecipitation with PCDHA11 antibody identifies interaction partners in cadherin and cytoskeletal networks.

Application Notes

Optimal dilution of the PCDHA11 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PCDHA11 recombinant protein (Position: E163-K324) was used as the immunogen for the PCDHA11 antibody.

Storage

After reconstitution, the PCDHA11 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.