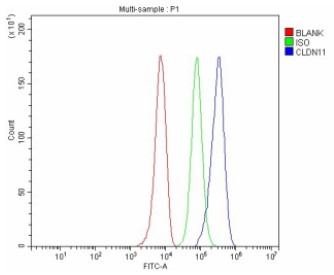
CLDN11 Antibody / Claudin 11 (FY12220)

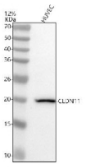
Catalog No.	Formulation	Size
FY12220	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	O75508
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This CLDN11 antibody is available for research use only.



Flow Cytometry analysis of HepG2 cells using anti-CLDN11 antibody. Overlay histogram showing HepG2 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-CLDN11 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of CLDN11 using anti-CLDN11 antibody. Lane 1: human HUVEC 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-CLDN11 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 CLDN11 at approximately 22 kDa. The expected band size for CLDN11 is at 22 kDa.

Description

CLDN11 antibody detects Claudin-11, encoded by the CLDN11 gene on chromosome 3q26.2. CLDN11 antibody is widely used in studies of tight junctions, myelination, and testis biology. Claudin-11 belongs to the claudin family of integral membrane proteins that form tight junction strands, regulating paracellular permeability and barrier functions. Unlike other claudins primarily expressed in epithelial tissues, CLDN11 is highly expressed in oligodendrocytes and Sertoli cells, where it plays unique roles in central nervous system myelin formation and in maintaining the blood-testis barrier.

Structurally, Claudin-11 is a ~23 kDa tetraspan membrane protein with two extracellular loops and a short cytoplasmic tail. These extracellular loops mediate homotypic and heterotypic interactions with claudins on adjacent cells, forming tight junction strands. Its C-terminal PDZ-binding motif recruits cytoplasmic scaffolding proteins such as ZO-1, linking junctions to the cytoskeleton.

Functionally, CLDN11 is essential for central nervous system function and fertility. In oligodendrocytes, it contributes to formation of myelin sheaths by establishing tight junctions that compartmentalize paranodal regions. In the testis, CLDN11 maintains the blood-testis barrier, supporting spermatogenesis by protecting germ cells from immune responses. Knockout mice lacking CLDN11 develop neurological deficits and male infertility, confirming its physiological importance. Researchers use CLDN11 antibody to study tight junction biology, myelin structure, and reproductive physiology.

Clinically, altered CLDN11 expression is linked to neurological disorders and infertility. Deficiency causes defects in myelination, contributing to tremors and motor dysfunction. In humans, CLDN11 has been implicated in demyelinating diseases and some forms of male infertility. Dysregulation of claudin proteins is also studied in cancer, where barrier integrity is often disrupted. NSJ Bioreagents provides CLDN11 antibody as a reliable reagent for neuroscience, fertility, and cancer research.

Experimentally, CLDN11 antibody is applied in immunohistochemistry to study oligodendrocytes and seminiferous tubules, in western blotting to detect the ~23 kDa protein, and in immunofluorescence microscopy to analyze tight junction distribution. Electron microscopy combined with CLDN11 antibody staining reveals detailed structural organization of tight junctions in myelin and testes.

Application Notes

Optimal dilution of the CLDN11 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human CLDN11 was used as the immunogen for the CLDN11 antibody.

Storage

After reconstitution, the CLDN11 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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