Anti-Claudin 11 Antibody [PSH25-21]

HA724515

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Mouse, Rat
Applications:	IHC-Fr, IHC-P, mIHC
Molecular Wt:	Predicted band size: 22 kDa
Clone number:	PSH25-21

Description: The protein encoded by this gene belongs to the claudin family of tight junction associated proteins and is a major component of central nervous system myelin that is necessary for normal CNS function, hearing, and spermatogenesis. There is growing evidence that the protein determines the permeability between layers of myelin sheaths and, with its expression highly regulated during development, may play an important role in cellular proliferation and migration. In addition, the protein is a candidate autoantigen in the development of autoimmune demyelinating disease. Finally, experiments in Cldn11-null mice demonstrate that behavioral phenotypes in open field tests, as well as defects in sound lateralization, accompany changes in neurotransmitter levels in the amygdala/ventral hippocampus and auditory brainstem. This study reveals a molecular mechanism by which changes to myelin membrane properties in the absence of degenerative pathology, could lead to neuropsychiatric disease in humans.

Immunogen: Synthetic peptide within mouse Claudin 11 aa 179-207.

Positive control: Mouse Brain, Mouse Testis, Rat Brain, Rat Testis.

Subcellular location: Cell junction, tight junction, Cell membrane.

Database links: SwissProt: Q60771 Mouse | Q99P82 Rat

Recommended Dilutions:

IHC-Fr	1:500
IHC-P	1:2,000-1:5,000
mIHC	1:2,000

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

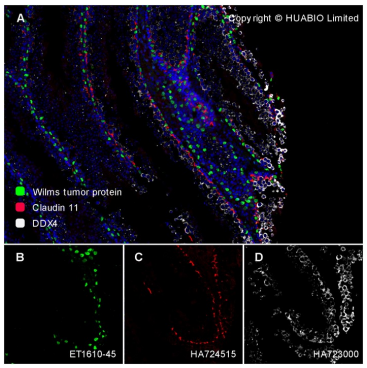


Fig1: mIHC analysis of mouse testis tissue (paraffin-embedded) with Claudin 11 (HA724515, 1/2,000), wilms tumor protein (ET1610-45, 1/1,000) and DDX4 (HA723000, 1/5,000).

The immunostaining was performed with the IRISKitCmTSA Kit (900802). DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

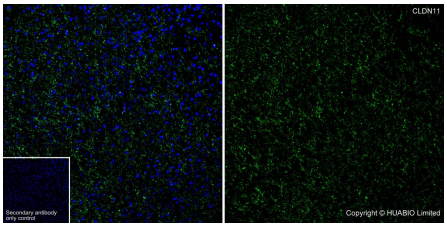


Fig2: Application: Immunofluorescence (IHC-Fr)

Species: Mouse
Tissue: Brain
Sample: Frozen section

Antigen retrieval: Not required

Wash buffer: 1× TBST
Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.

Primary antibody: HA724515, 1/500, overnight at 4°C.
Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

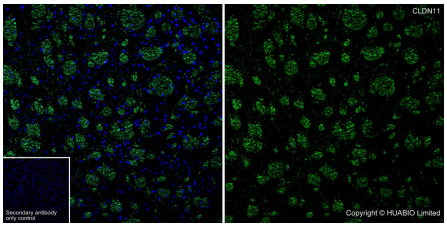


Fig3: Application: Immunofluorescence (IHC-Fr)

Species: Mouse
Tissue: Brain (striatum)
Sample: Frozen section

Antigen retrieval: Not required

Wash buffer: 1× TBST
Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.

Primary antibody: HA724515, 1/500, overnight at 4°C.
Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

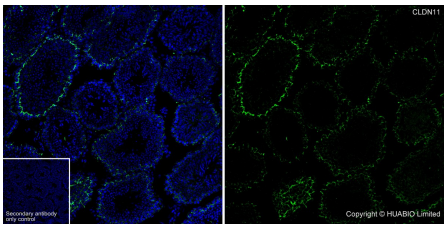


Fig4: Application: Immunofluorescence (IHC-Fr)

Species: Mouse
Tissue: Testis
Sample: Frozen section

Antigen retrieval: Not required

Wash buffer: 1× TBST
Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.

Primary antibody: HA724515, 1/500, overnight at 4°C.
Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

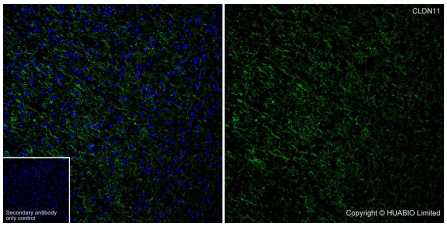


Fig5: Application: Immunofluorescence (IHC-Fr)

Species: Rat
Tissue: Brain
Sample: Frozen section

Antigen retrieval: Not required

Wash buffer: 1× TBST
Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.

Primary antibody: HA724515, 1/500, overnight at 4°C.
Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

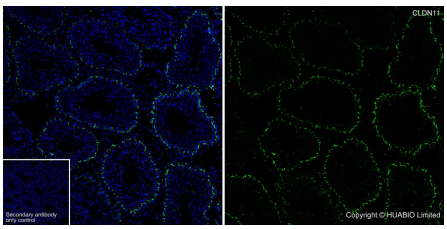


Fig6: Application: Immunofluorescence (IHC-Fr)

Species: Rat
Tissue: Testis
Sample: Frozen section

Antigen retrieval: Not required

Wash buffer: 1× TBST
Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.

Primary antibody: HA724515, 1/500, overnight at 4°C.
Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

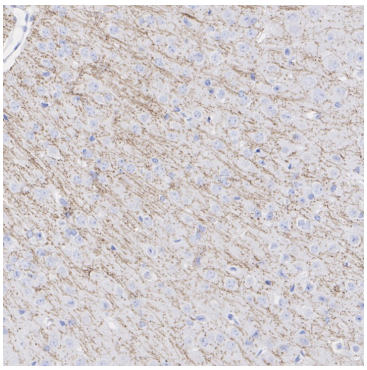


Fig7: Application: Immunohistochemistry (IHC-P)

Species: Mouse
Tissue: Brain
Sample: Paraffin-embedded section

Antigen retrieval: Heat-mediated, Tris-EDTA buffer (pH 9.0), 20 minutes at 95°C.

Wash buffer: 1× TBST
Endogenous peroxidase blocking: 3% H_2O_2, 10 minutes at room temperature.
Blocking: 1% BSA + 10% normal goat serum, 10 minutes at room temperature.
Primary antibody: HA724515, 1/5,000, 1 hour at room temperature.
Secondary antibody: HA1119, 20 minutes at room temperature.

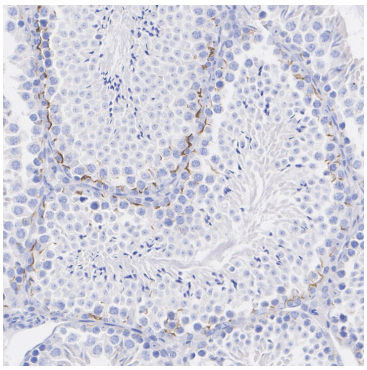


Fig8: Application: Immunohistochemistry (IHC-P)

Species: Mouse
Tissue: Testis
Sample: Paraffin-embedded section

Antigen retrieval: Heat-mediated, Tris-EDTA buffer (pH 9.0), 20 minutes at 95°C.

Wash buffer: 1× TBST
Endogenous peroxidase blocking: 3% H_2O_2, 10 minutes at room temperature.
Blocking: 1% BSA + 10% normal goat serum, 10 minutes at room temperature.
Primary antibody: HA724515, 1/2,000, 1 hour at room temperature.
Secondary antibody: HA1119, 20 minutes at room temperature.

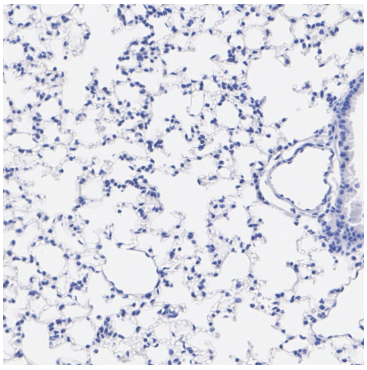


Fig9: Application: Immunohistochemistry (IHC-P)

Species: Mouse
Tissue: Lung
Sample: Paraffin-embedded section

Antigen retrieval: Heat-mediated, Tris-EDTA buffer (pH 9.0), 20 minutes at 95°C.

Negative control: lung (PMID: 40079504).

Wash buffer: 1× TBST
Endogenous peroxidase blocking: 3% H_2O_2, 10 minutes at room temperature.
Blocking: 1% BSA + 10% normal goat serum, 10 minutes at room

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Liu K et al. Unveiling the oncogenic role of CLDN11-secreting fibroblasts in gastric cancer peritoneal metastasis through single-cell sequencing and experimental approaches. Int Immunopharmacol. 2024 Mar
2. Yang L et al. CLDN11 deficiency upregulates FOXM1 to facilitate breast tumor progression through hedgehog signaling pathway. J Mol Histol. 2024 Dec