

# Anti-Myelin PLP Antibody [PSH08-21]

HA722964



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IHC-P, IF-Tissue, IHC-Fr
<b>Molecular Wt:</b>	Predicted band size: 30 kDa
<b>Clone number:</b>	PSH08-21

**Description:** Proteolipid protein 1 (PLP1) is a form of myelin proteolipid protein (PLP). Mutations in PLP1 are associated with Pelizaeus–Merzbacher disease. It is a 4 transmembrane domain protein which is proposed to bind other copies of itself on the extracellular side of the membrane. In a myelin sheath, as the layers of myelin wraps come together, PLP will bind itself and tightly hold the cellular membranes together. This gene encodes a transmembrane proteolipid protein that is the predominant myelin protein present in the central nervous system (CNS). The encoded protein functions in myelination. This protein may play a role in the compaction, stabilization, and maintenance of myelin sheaths, as well as in oligodendrocyte development and axonal survival. Mutations associated with this gene cause X-linked Pelizaeus–Merzbacher disease and spastic paraplegia type 2. Two transcript variants encoding distinct isoforms have been identified for this gene. In melanocytic cells PLP1 gene expression may be regulated by MITF.

**Immunogen:** Recombinant protein within human Myelin PLP aa 1-233.

**Positive control:** Mouse brain tissue lysate, Rat brain tissue lysate, human brain tissue, mouse brain tissue, rat brain tissue.

**Subcellular location:** Cell membrane, Myelin membrane.

**Database links:** SwissProt: P60201 Human | P60202 Mouse | P60203 Rat

**Recommended Dilutions:**

<b>WB</b>	1:5,000
<b>IHC-P</b>	1:800
<b>IF-Tissue</b>	1:500
<b>IHC-Fr</b>	1:500-1:1,000

**Storage Buffer:** PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders: 0086-571-88062880

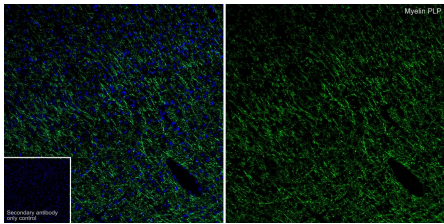
Technical: 0086-571-89986345

Service mail: support@huabio.cn

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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images



**Fig1:** Application: IHC-Fr

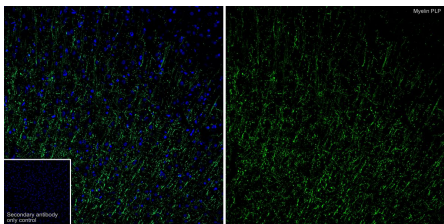
Species: Mouse

Site: Cerebral cortex

Sample: Frozen section

Antibody concentration: 1/500

Antigen retrieval: Not required



**Fig2:** Application: IHC-Fr

Species: Rat

Site: Cerebral cortex

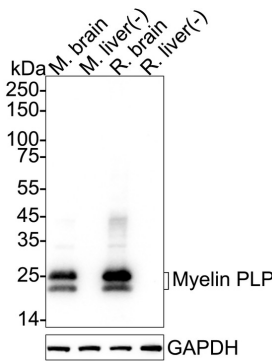
Sample: Frozen section

Antibody concentration: 1/500

Antigen retrieval: Not required

**Fig3:** Western blot analysis of Myelin PLP on different lysates with Rabbit anti-Myelin PLP antibody (HA722964) at 1/5,000 dilution.

- Lane 1: Mouse brain tissue lysate (no heat) (20 µg/Lane)
- Lane 2: Mouse liver tissue lysate (negative) (20 µg/Lane)
- Lane 3: Rat brain tissue lysate (no heat) (20 µg/Lane)
- Lane 4: Rat liver tissue lysate (negative) (20 µg/Lane)



Notice: no heat means the lysate is not boiled.

Predicted band size: 30 kDa

Observed band size: 25/20 kDa

Exposure time: 1 minute; ECL: K1801;  
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA722964) at 1/5,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

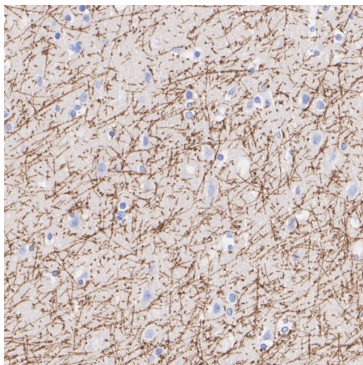
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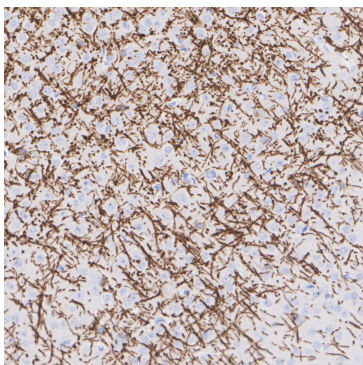
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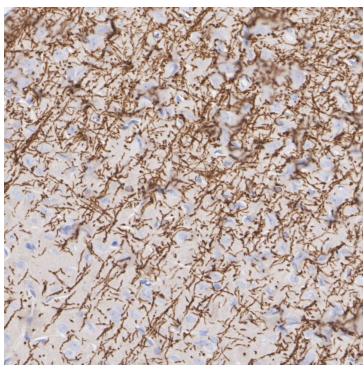
**Fig4:** Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-Myelin PLP antibody (HA722964) at 1/800 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA722964) at 1/800 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



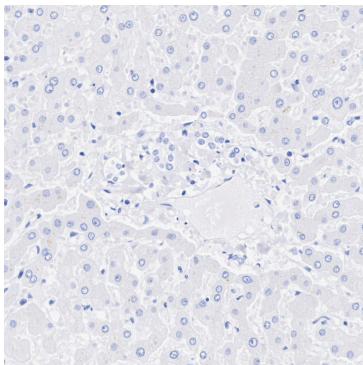
**Fig5:** Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-Myelin PLP antibody (HA722964) at 1/800 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA722964) at 1/800 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



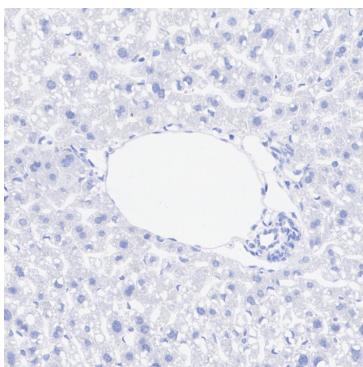
**Fig6:** Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-Myelin PLP antibody (HA722964) at 1/800 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA722964) at 1/800 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



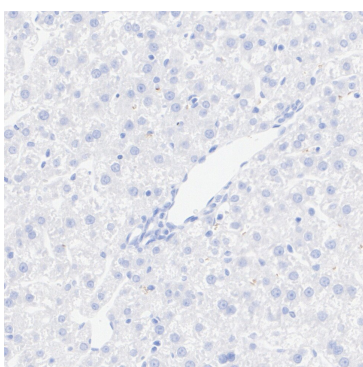
**Fig7:** Immunohistochemical analysis of paraffin-embedded human liver tissue (negative) with Rabbit anti-Myelin PLP antibody (HA722964) at 1/800 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA722964) at 1/800 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig8:** Immunohistochemical analysis of paraffin-embedded mouse liver tissue (negative) with Rabbit anti-Myelin PLP antibody (HA722964) at 1/800 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA722964) at 1/800 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig9:** Immunohistochemical analysis of paraffin-embedded rat liver tissue (negative) with Rabbit anti-Myelin PLP antibody (HA722964) at 1/800 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA722964) at 1/800 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



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

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### Background References

1. Ruskamo S et al. Human myelin proteolipid protein structure and lipid bilayer stacking. Cell Mol Life Sci. 2022 Jul
2. Mohammadi-Milasi F et al. In silico study of the association of the HLA-A\*31:01 allele (human leucocyte antigen allele 31:01) with neuroantigenic epitopes of PLP (proteolipid protein), MBP (myelin basic protein) and MOG proteins (myelin oligodendrocyte glycoprotein) for studying the multiple sclerosis disease pathogenesis. J Biomol Struct Dyn. 2021 Apr

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