Anti-PROX1 Antibody [JE59-87]

HA722318

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IF-Cell, IHC-P, IF-Tissue
Molecular Wt:	Predicted band size: 83 kDa
Clone number:	JE59-87

Description: Prospero homeobox protein 1 is a protein that in humans is encoded by the PROX1 gene. The Prox1 gene is critical for the development of multiple tissues. Prox1 activity is necessary and sufficient to specify a lymphatic endothelial cell fate in endothelial progenitors located in the embryonic veins. PROX1 has been shown to interact with EP300. PROX1 is produced primarily in the dentate gyrus in the mouse, and in the dentate gyrus and white matter in humans. Gene expression data for mouse, human and macaque from the Allen Brain Atlases can be found here.

Immunogen: Recombinant protein within Human PROX1 aa 1-100 / 737.

Positive control: SW620 cell lysate, SH-SY5Y cell lysate, HepG2 cell lysate, SH-SY5Y, human colon cancer tissue, mouse hippocampus tissue.

Subcellular location: Nucleus.

Database links: SwissProt: Q92786 Human | P48437 Mouse

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:100
IHC-P	1:200-1:1,000
IF-Tissue	1:50-1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

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

Purity: Protein A affinity purified.

Images

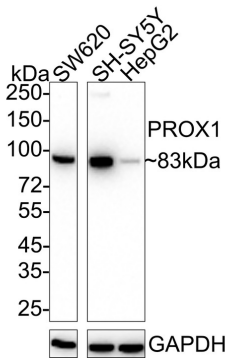

Fig1: Western blot analysis of PROX1 on different lysates with Rabbit anti-PROX1 antibody (HA722318) at 1/1,000 dilution.

Lane 1: SW620 cell lysate
Lane 2: SH-SY5Y cell lysate
Lane 3: HepG2 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 83 kDa
Observed band size: 83 kDa

Exposure time: 2 minutes 38 seconds; 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 (HA722318) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

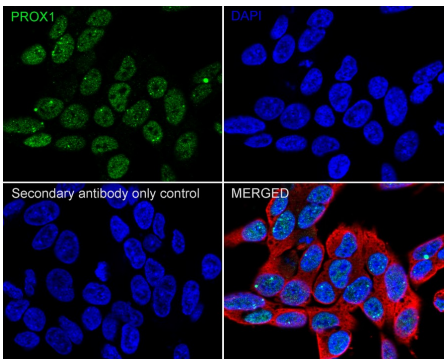

Fig2: Immunocytochemistry analysis of SH-SY5Y cells labeling PROX1 with Rabbit anti-PROX1 antibody (HA722318) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-PROX1 antibody (HA722318) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

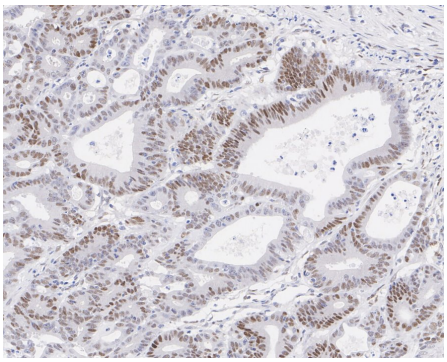

Fig3: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue with Rabbit anti-PROX1 antibody (HA722318) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722318) at 1/200 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.

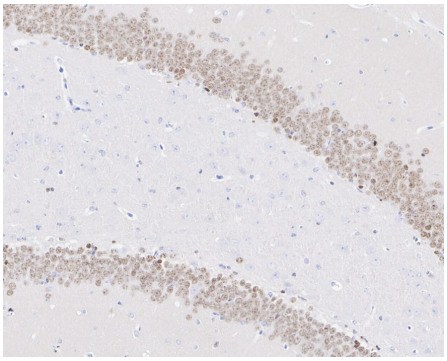

Fig4: Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Rabbit anti-PROX1 antibody (HA722318) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722318) at 1/1,000 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.

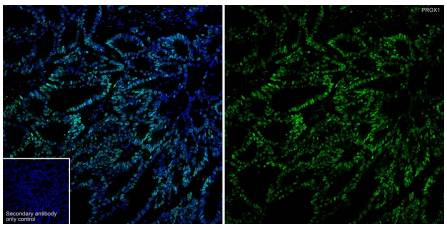

Fig5: Immunofluorescence analysis of paraffin-embedded human colon cancer tissue labeling PROX1 with Rabbit anti-PROX1 antibody (HA722318) at 1/200 dilution.

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 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA722318, green) at 1/200 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

Background References

1. Zhu L et al. PROX1 promotes breast cancer invasion and metastasis through WNT/beta-catenin pathway via interacting with hnRNPK. Int J Biol Sci. 2022 Feb
2. Wang Y et al. AMPK induces degradation of the transcriptional repressor PROX1 impairing branched amino acid metabolism and tumourigenesis. Nat Commun. 2022 Nov