Anti-Parvalbumin Antibody [JM100-08]

ET1703-15

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IHC-Fr, IF-Tissue, IP
Molecular Wt:	Predicted band size: 12 kDa
Clone number:	JM100-08

Description: Parvalbumin (PV) is a calcium-binding protein with low molecular weight (typically 9-11 kDa). In humans, it is encoded by the PVALB gene. It is not a member of the albumin family; it is named for its size (parv-, from Latin parvus small) and its ability to coagulate. It has three EF hand motifs and is structurally related to calmodulin and troponin C. Parvalbumin is found in fast-contracting muscles, where its levels are highest, as well as in the brain and some endocrine tissues. Parvalbumin is a small, stable protein containing EF-hand type calcium binding sites. It is involved in calcium signaling. Calcium binding proteins like parvalbumin play a role in many physiological processes, namely cell-cycle regulation, second messenger production, muscle contraction, organization of microtubules and phototransduction. Therefore, calcium-binding proteins must distinguish calcium in the presence of high concentrations of other metal ions. The mechanism for the calcium selectivity has been extensively studied.

Immunogen: Recombinant protein within Human Paravalbumin aa 1-110 / 110.

Positive control: RPMI 8226 cell lysate, human kidney tissue, mouse kidney tissue, mouse cerebellum tissue, rat cerebellum tissue.

Subcellular location: Axon, cytoplasm, synapse.

Database links: SwissProt: P20472 Human | P32848 Mouse | P02625 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:200-1:1,000
IHC-Fr	1:500
IF-Tissue	1:200
IP	1-2μg/sample

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

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

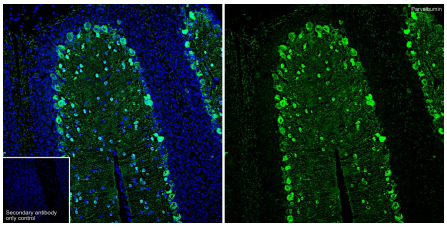

Fig1: Immunofluorescence analysis of frozen mouse cerebellum tissue with Rabbit anti-Parvalbumin antibody (ET1703-15) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for about 2 minutes in microwave oven. 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 (ET1703-15, green) at 1/500 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).

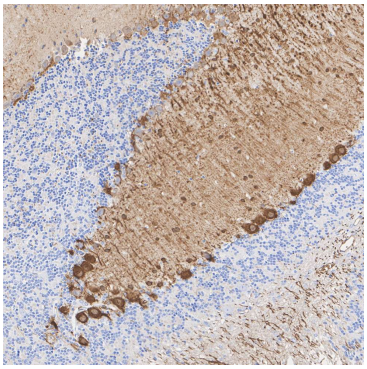

Fig2: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rabbit anti-Parvalbumin antibody (ET1703-15) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) 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 (ET1703-15) 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.

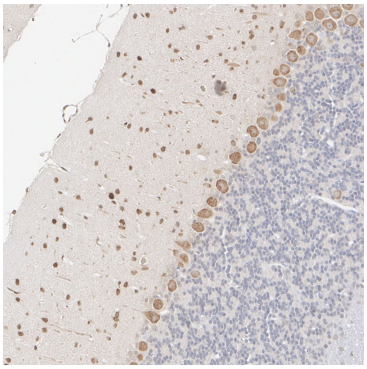

Fig3: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rabbit anti-Parvalbumin antibody (ET1703-15) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) 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 (ET1703-15) 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.

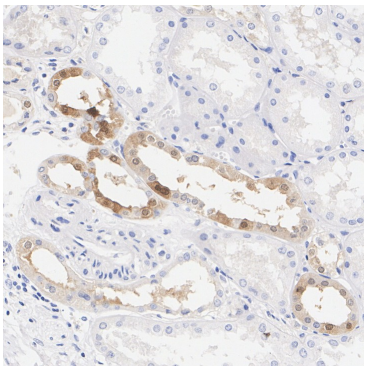

Fig4: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-Parvalbumin antibody (ET1703-15) at 1/200 dilution.

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 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1703-15) 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.

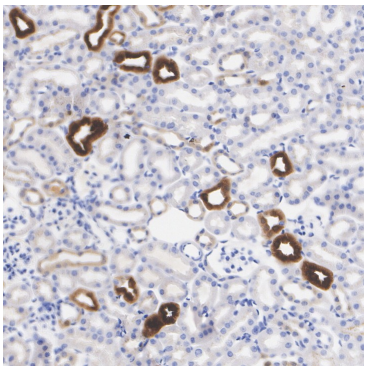

Fig5: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-Parvalbumin antibody (ET1703-15) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) 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 (ET1703-15) 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.

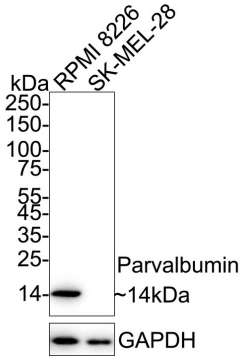

Fig6: Western blot analysis of Parvalbumin on different lysates with Rabbit anti-Parvalbumin antibody (ET1703-15) at 1/1,000 dilution.

Lane 1: RPMI 8226 cell lysate
Lane 2: SK-MEL-28 cell lysate (negative)

Lysates/proteins at 20 µg/Lane.

Predicted band size: 12 kDa
Observed band size: 14 kDa

Exposure time: 30 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 (ET1703-15) 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.

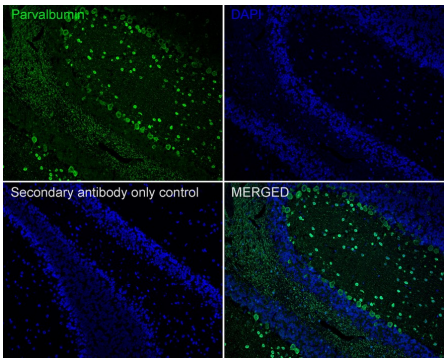

Fig7: Immunofluorescence analysis of paraffin-embedded mouse cerebellum tissue labeling Parvalbumin with Rabbit anti-Parvalbumin antibody (ET1703-15) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 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 (ET1703-15, 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).

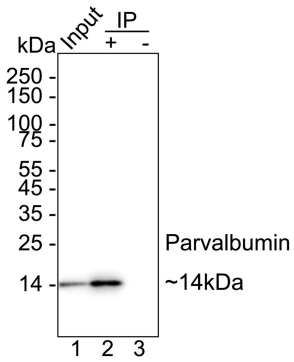

Fig8: Parvalbumin was immunoprecipitated from 0.2 mg RPMI 8226 cell lysate with ET1703-15 at 2 µg/25 µl agarose. Western blot was performed from the immunoprecipitate using ET1703-15 at 1/1,000 dilution. Anti-Rabbit IgG for IP Nano-secondary antibody (NBI01H) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: RPMI 8226 cell lysate (input)
Lane 2: ET1703-15 IP in RPMI 8226 cell lysate
Lane 3: Rabbit IgG instead of ET1703-15 in RPMI 8226 cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 10 seconds; ECL: K1801

Background References

1. Cornez G et al. Anatomically discrete sex differences in neuroplasticity in zebra finches as reflected by perineuronal nets. PLoS One 10:e0123199 (2015).
2. Whissell PD et al. Comparative density of CCK- and PV-GABA cells within the cortex and hippocampus. Front Neuroanat 9:124 (2015).