Anti-NeuN Antibody [PD01-45]

HA601111

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Tissue, IHC-P, IHC-Fr
Molecular Wt:	Predicted band size: 34 kDa
Clone number:	PD01-45

Description: Neuronal nuclei (NeuN, Fox-3, RBFOX3) is a nuclear protein expressed in most post-mitotic neurons of the central and peripheral nervous systems. NeuN is not detected in Purkinje cells, sympathetic ganglion cells, Cajal-Retzius cells, INL retinal cells, inferior olivary, and dentate nucleus neurons. This neuronal protein was originally identified by immunoreactivity with a monoclonal antibody also called NeuN. Using MS-analysis, NeuN was later identified as the Fox-3 gene product. Fox-3 contains an RNA recognition motif and functions as a splicing regulator. Fox-3 regulates alternative splicing of NumB, promoting neuronal differentiation during development.

Immunogen: Synthetic peptide within human NeuN aa 20-60.

Positive control: SH-SY5Y cell lysate, SHG44 cell lysate, Human brain tissue, mouse hippocampus tissue, mouse brain tissue, mouse cerebellum tissue, rat hippocampus tissue, rat brain tissue, rat cerebellum tissue, mouse cerebellum tissue lysates, mouse cerebral cortex tissue.

Subcellular location: Cytoplasm, Nucleus

Database links: SwissProt: A6NFN3 Human | Q8BIF2 Mouse
Unigene: 143966 Rat

Recommended Dilutions:

WB	1:1,000
IF-Tissue	1:500
IHC-P	1:1,000
IHC-Fr	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℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

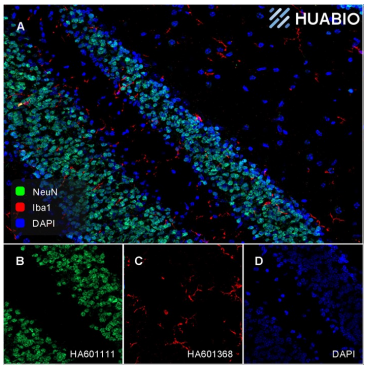

Fig1: Application: IHC-Fr

Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1/500 (NeuN, HA601111, Mouse, green); 1/500 (Iba1, HA601368, Guinea pig, red)

Antigen retrieval: Not required

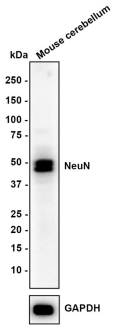

Fig2: Western blot analysis of NeuN on mouse cerebellum tissue lysate with Mouse anti-NeuN antibody (HA601111) at 1/1,000 dilution.

Lysates/proteins at 10 µg/Lane.
Exposure time: 20 seconds; ECL: K1801

Blocking: 5% NFDM/TBST, 1 hour at room temperature
Primary antibody: HA601111, 1/1,000 in 5% NFDM/TBST, overnight at 4 ℃
Secondary antibody: Anti-Mouse IgG for IP, AlpSdAbs® VHH(HRP) (001-100-005), 1/50,000 in 5% NFDM/TBST, 1 hour at room temperature

Predicted band size: 34 kDa
Observed band size: 45/50 kDa

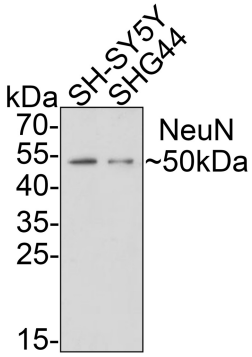

Fig3: Western blot analysis of NeuN on different lysates with Mouse anti-NeuN antibody (HA601111) at 1/500 dilution.

Lane 1: SH-SY5Y cell lysate
Lane 2: SHG44 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 34 kDa
Observed band size: 50 kDa

Exposure time: 2 minutes;

10% 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 (HA601111) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:150,000 dilution was used for 1 hour at room temperature.

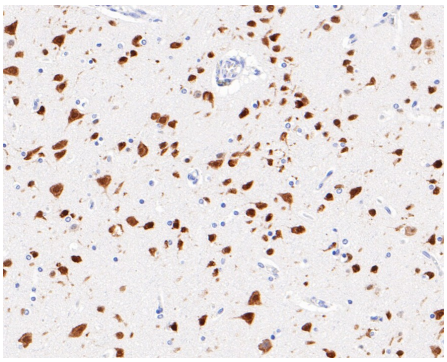

Fig4: Immunohistochemical analysis of paraffin-embedded human brain tissue with Mouse anti-NeuN antibody (HA601111) at 1/1,000 dilution.

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 (HA601111) 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.

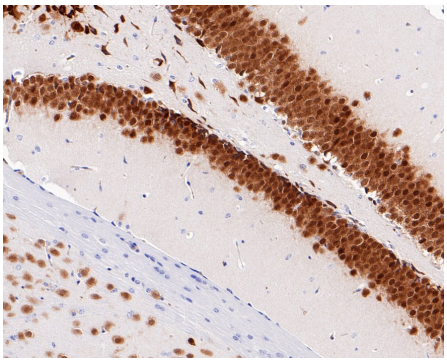

Fig5: Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Mouse anti-NeuN antibody (HA601111) at 1/1,000 dilution.

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 (HA601111) 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.

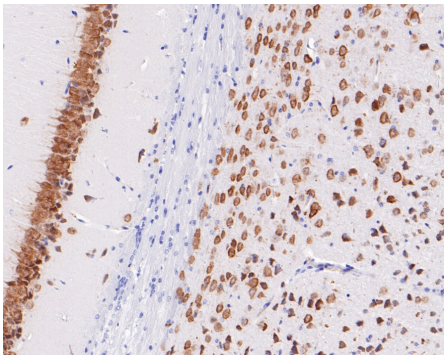

Fig6: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Mouse anti-NeuN antibody (HA601111) at 1/1,000 dilution.

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 (HA601111) 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.

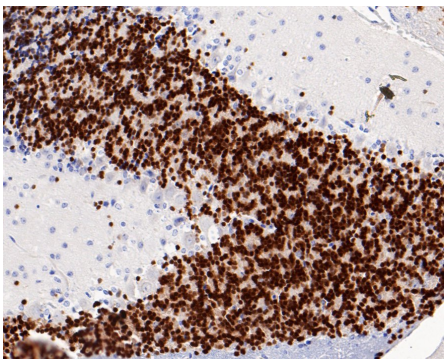

Fig7: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Mouse anti-NeuN antibody (HA601111) at 1/1,000 dilution.

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 (HA601111) 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.

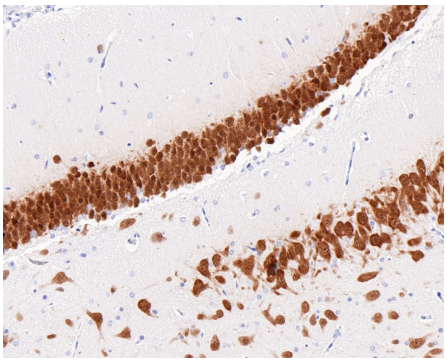

Fig8: Immunohistochemical analysis of paraffin-embedded rat hippocampus tissue with Mouse anti-NeuN antibody (HA601111) at 1/1,000 dilution.

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 (HA601111) 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.

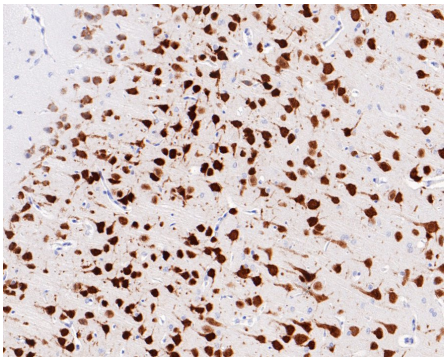

Fig9: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Mouse anti-NeuN antibody (HA601111) at 1/1,000 dilution.

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 (HA601111) 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.

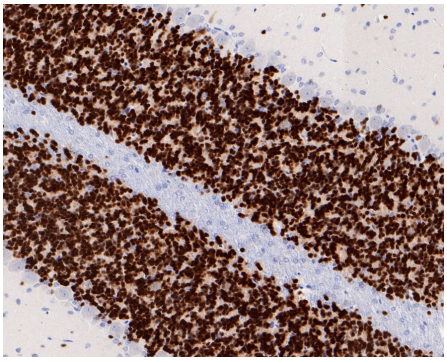

Fig10: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Mouse anti-NeuN antibody (HA601111) at 1/1,000 dilution.

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 (HA601111) 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.

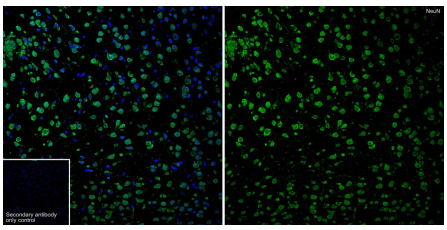

Fig11: Application: IF-tissue

Species: Mouse

Site: Cerebral cortex

Sample: Paraffin-embedded section

Antibody concentration: 1/500

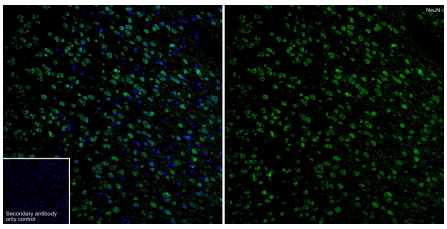

Fig12: Application: IF-tissue

Species: Rat

Site: Cerebral cortex

Sample: Paraffin-embedded section

Antibody concentration: 1/500

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

Background References

1. Patel TP et al. Single-neuron NMDA receptor phenotype influences neuronal rewiring and reintegration following traumatic injury. J Neurosci 34:4200-13 (2014).
2. Kaur P et al. Expression profiling of RNA transcripts during neuronal maturation and ischemic injury. PLoS One 9:e103525 (2014).