

Anti-NeuroD1 Antibody [JM11-10] - BSA and Azide free

HA751840



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	WB, IP, IHC-P, IHC-Fr
Molecular Wt:	Predicted band size: 40 kDa
Clone number:	JM11-10

Description: The basic helix-loop-helix (bHLH) proteins are transcription factors that are required for several aspects of development, including cell type determination, terminal differentiation and sex determination. The HLH domain is required for dimerization, while the basic region makes specific contacts with DNA. Members of the myogenic determination family, MyoD, myf5, myogenin and MRF4, all have bHLH domains. These proteins heterodimerize with members of the E protein family and initiate myogenesis. Neuro D has been identified as a bHLH transcription factor functioning in neurogenic differentiation. Neuro D is expressed transiently in a subset of neurons in the central and peripheral nervous systems at the time of their terminal differentiation into mature neurons. Moreover, ectopic expression of Neuro D in Xenopus embryos induces premature differentiation of neuronal precursors and Neuro D can convert presumptive epidermal cells into neurons.

Immunogen: Synthetic peptide within Human NeuroD1 aa 1-44 / 356.

Positive control: Mouse cerebellum tissue, rat brain tissue, rat cerebellum tissue, Mouse cerebellum (P7) tissue lysate, Mouse cerebellum tissue lysate, Rat cerebellum tissue lysate.

Subcellular location: Cytoplasm. Nucleus.

Database links: SwissProt: Q13562 Human | Q60867 Mouse | Q64289 Rat

Recommended Dilutions:

WB	1:1,000
IP	1:10-1:50
IHC-P	1:200-1:500
IHC-Fr	1:100

Storage Buffer: PBS (pH7.4).

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

Purity: Protein A affinity purified.

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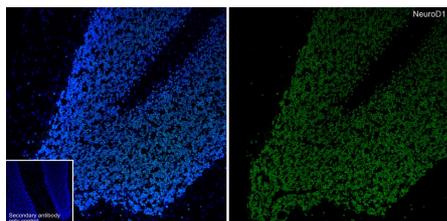
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Images

**Fig1:** Application: IHC-Fr

Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1:100

Antigen retrieval: Recommend. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for about 2 minutes in microwave oven.

Fig2: Application: IHC-Fr

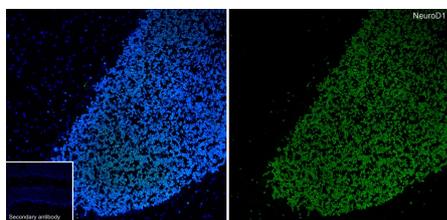
Species: Rat

Site: Cerebellum

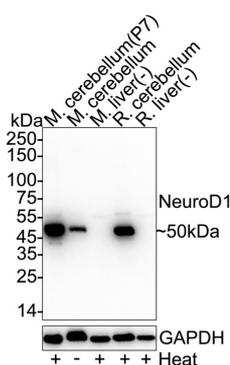
Sample: Frozen section

Antibody concentration: 1:100

Antigen retrieval: Recommend. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for about 2 minutes in microwave oven.

**Fig3:** Western blot analysis of NeuroD1 on different lysates with Rabbit anti-NeuroD1 antibody (HA751840) at 1/1,000 dilution.

Lane 1: Mouse cerebellum (P7) tissue lysate (40 µg/Lane)
 Lane 2: Mouse cerebellum tissue lysate (no heat) (40 µg/Lane)
 Lane 3: Mouse liver tissue lysate (negative) (40 µg/Lane)
 Lane 4: Rat cerebellum tissue lysate (40 µg/Lane)
 Lane 5: Rat liver tissue lysate (negative) (40 µg/Lane)



Notice: no heat means the lysate is not boiled.

Predicted band size: 40 kDa

Observed band size: 50 kDa

Exposure time: 51 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 (HA751840) at 1/1,000 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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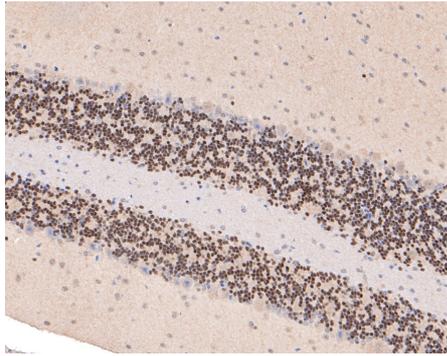


Fig4: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rabbit anti-NeuroD1 antibody (HA751840) at 1/500 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA751840) at 1/500 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.

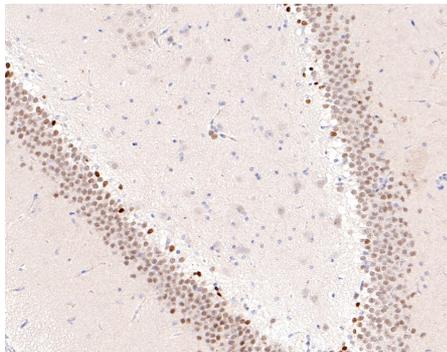


Fig5: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-NeuroD1 antibody (HA751840) at 1/400 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA751840) at 1/400 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.

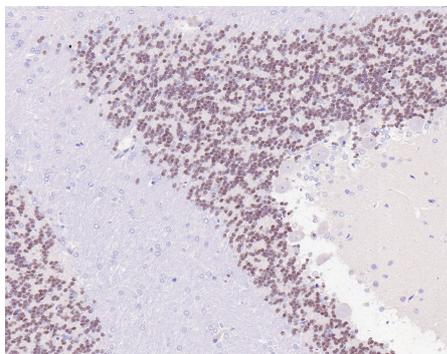


Fig6: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rabbit anti-NeuroD1 antibody (HA751840) at 1/200 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA751840) 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.

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

Background References

1. Zhang F et al. Phosphofructokinase-1 Negatively Regulates Neurogenesis from Neural Stem Cells. *Neurosci Bull* 32:205-16 (2016).
2. Borromeo MD et al. ASCL1 and NEUROD1 Reveal Heterogeneity in Pulmonary Neuroendocrine Tumors and Regulate Distinct Genetic Programs. *Cell Rep* 16:1259-72 (2016).

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