# Anti-NeuroD1 Antibody [JM11-10]

## ET1703-73

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|---|---|
| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human, Mouse, Rat |
| **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:** Rat brain tissue, mouse cerebellum tissue, rat cerebellum tissue, Human brain tissue lysate, SH-SY5Y cell lysate.

**Subcellular location:** Cytoplasm. Nucleus.

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

**Recommended Dilutions:**

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

**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

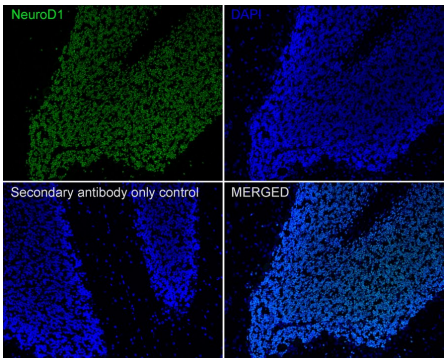


**Fig1:** Immunofluorescence analysis of frozen mouse cerebellum tissue with Rabbit anti-NeuroD1 antibody (ET1703-73) at 1/100 dilution.

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 (ET1703-73, green) at 1/100 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).

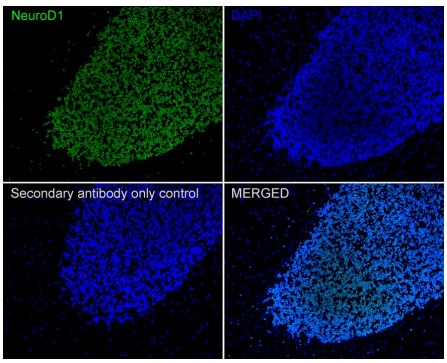


**Fig2:** Immunofluorescence analysis of frozen rat cerebellum tissue with Rabbit anti-NeuroD1 antibody (ET1703-73) at 1/100 dilution.

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 (ET1703-73, green) at 1/100 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).

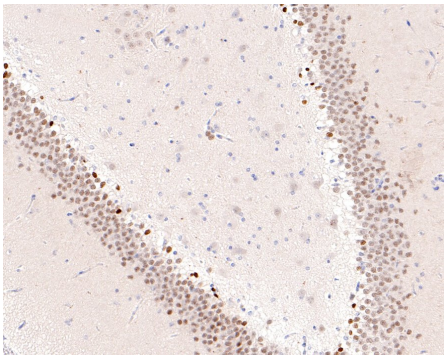

**Fig3:** Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-NeuroD1 antibody (ET1703-73) at 1/400 dilution.

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 dd$H_2O$ and PBS, and then probed with the primary antibody (ET1703-73) 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.

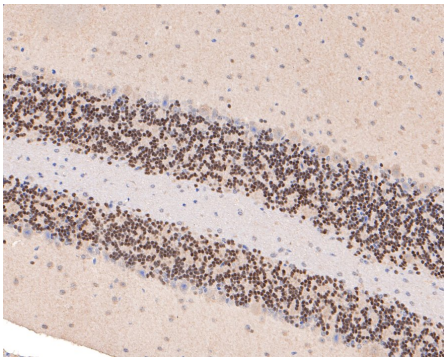

**Fig4:** Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rabbit anti-NeuroD1 antibody (ET1703-73) at 1/500 dilution.

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 (ET1703-73) 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.

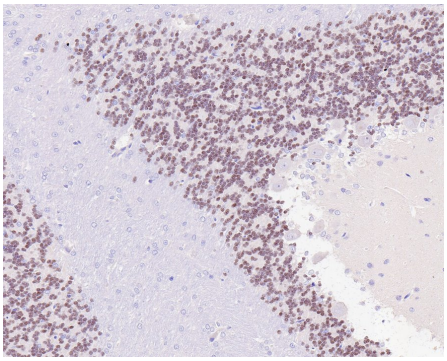

**Fig5:** Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rabbit anti-NeuroD1 antibody (ET1703-73) at 1/200 dilution.

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 (ET1703-73) 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.

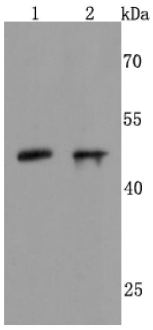


**Fig6:** Western blot analysis of NeuroD1 on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ET1703-73, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.
**Positive control:**
Lane 1: Human brain tissue lysate
Lane 2: SH-SY5Y cell lysate

## 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).