

Neuro D (G-20): sc-1086

BACKGROUND

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.

CHROMOSOMAL LOCATION

Genetic locus: NEUROD1 (human) mapping to 2q31.3; Neurod1 (mouse) mapping to 2 C3.

SOURCE

Neuro D (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Neuro D of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1086 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-1086 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Neuro D (G-20) is recommended for detection of Neuro D of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Neuro D (G-20) is also recommended for detection of Neuro D in additional species, including bovine and porcine.

Suitable for use as control antibody for Neuro D siRNA (h): sc-36035, Neuro D siRNA (m): sc-36034, Neuro D shRNA Plasmid (h): sc-36035-SH, Neuro D shRNA Plasmid (m): sc-36034-SH, Neuro D shRNA (h) Lentiviral Particles: sc-36035-V and Neuro D shRNA (m) Lentiviral Particles: sc-36034-V.

Neuro D (G-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

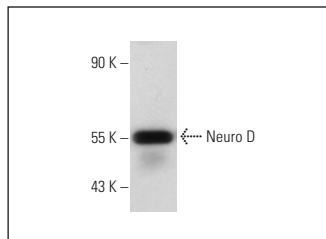
Molecular Weight of Neuro D: 50 kDa.

Positive Controls: MM-142 nuclear extract: sc-2139, Y79 whole cell lysate: sc-2240 or Y79 nuclear extract: sc-2126.

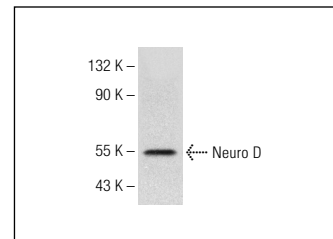
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Neuro D (G-20): sc-1086. Western blot analysis of Neuro D expression in Y79 whole cell lysate.



Neuro D (G-20): sc-1086. Western blot analysis of Neuro D expression in MM-142 nuclear extract.

SELECT PRODUCT CITATIONS

1. Acharya, H.R., et al. 1997. cDNA cloning and expression analysis of Neuro D mRNA in human retina. *Biochem. Biophys. Res. Commun.* 233: 459-463.
2. Hahn, C.G., et al. 2005. *In vivo* and *in vitro* neurogenesis in human olfactory epithelium. *J. Comp. Neurol.* 2005: 154-163.
3. Andrali, S.S., et al. 2007. Glucose mediates the translocation of Neuro D1 by O-linked glycosylation. *J. Biol. Chem.* 282: 15589-15596.
4. Watanabe, Y., et al. 2009. Fezf1 is required for penetration of the basal lamina by olfactory axons to promote olfactory development. *J. Comp. Neurol.* 515: 565-584.
5. Tang, X., et al. 2009. Identification of glucose-regulated miRNAs from pancreatic β cells reveals a role for miR-30d in Insulin transcription. *RNA* 15: 287-293.
6. Nishikawa, T., et al. 2009. Effect of intranasal administration of basic fibroblast growth factor on olfactory epithelium. *Neuroreport* 20: 764-769.
7. Guo, Z., et al. 2010. Expression of pax6 and sox2 in adult olfactory epithelium. *J. Comp. Neurol.* 518: 4395-4418.
8. Oeschger, F.M., et al. 2012. Gene expression analysis of the embryonic subplate. *Cereb. Cortex* 22: 1343-1359.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **Neuro D (A-10): sc-46684** or **Neuro D (G-12): sc-398891**, our highly recommended monoclonal alternatives to Neuro D (G-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Neuro D (A-10): sc-46684**.