

Neuro D (N-19): sc-1084

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 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Neuro D of mouse origin.

PRODUCT

Each vial contains 100 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-1084 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-1084 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Neuro D (N-19) 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 (N-19) is also recommended for detection of Neuro D in additional species, including canine, 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 (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Neuro D: 50 kDa.

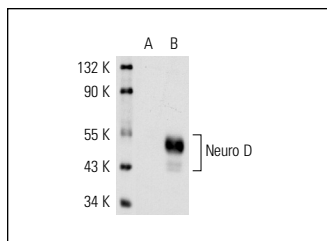
STORAGE

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

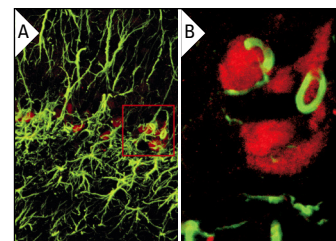
RESEARCH USE

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

DATA



Neuro D (N-19): sc-1084. Western blot analysis of Neuro D expression in non-transfected: sc-110760 (A) and human Neuro D transfected: sc-110985 (B) 293 whole cell lysates.



Neuro D (N-19): sc-1084. Immunofluorescence staining of Neuro D (red) and GFAP (green) in dentate gyrus of seven day post-ischemic rat brain perfused with 4% para-formaldehyde at low magnification (A) and thin optical sections (~1 µm) under high magnification (B) demonstrating glial cells wrapping around new neurons to guide their projection. Kindly provided by Dr. Dan Small and Dr. Robert Monette from the Institute for Biological Sciences, NRC, Ottawa, Canada.

SELECT PRODUCT CITATIONS

- 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.
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- Lecomte, S., et al. 2010. Roles of heat shock factor 1 and 2 in response to proteasome inhibition: consequence on p53 stability. *Oncogene* 29: 4216-4224.
- Cho, K.I., et al. 2010. Neuroprotection resulting from insufficiency of RANBP2 is associated with the modulation of protein and lipid homeostasis of functionally diverse but linked pathways in response to oxidative stress. *Dis. Model. Mech.* 3: 595-604.
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Try **Neuro D (A-10): sc-46684** or **Neuro D (G-12): sc-398891**, our highly recommended monoclonal alternatives to Neuro D (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Neuro D (A-10): sc-46684**.