Neuro D (G-12): sc-398891

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

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, Myf-5, myogenin and Mrf-4, 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-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 309-335 near the C-terminus of Neuro D of mouse origin.

PRODUCT

Each vial contains 200 µg IgG$_1$ kappa light chain 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-398891 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-398891 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

Neuro D (G-12) is recommended for detection of Neuro D of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Neuro D: 50 kDa.

Positive Controls: Neuro D (h): 293 Lysate: sc-110985.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA
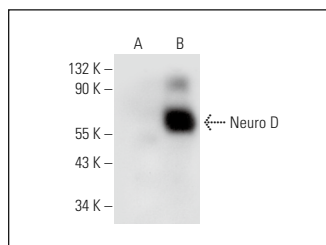
Neuro D (G-12): sc-398891. Western blot analysis of Neuro D expression in non-transfected: sc-110760 (**A**) and human Neuro D transfected: sc-110985 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Ma, Q., et al. 2016. Extremely low-frequency electromagnetic fields promote *in vitro* neuronal differentiation and neurite outgrowth of embryonic neural stem cells via up-regulating TRPC1. PLoS ONE 11: e0150923.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.