SANTA CRUZ BIOTECHNOLOGY, INC.

Neuro D (H-76): sc-20805

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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, 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 (H-76) is a rabbit polyclonal antibody raised against amino acids 281-356 mapping at the C-terminus of Neuro D of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Neuro D (H-76) 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 (H-76) 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.

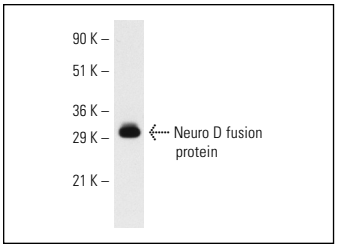
Molecular Weight of Neuro D: 50 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Neuro D (H-76): sc-20805. Western blot analysis of human recombinant Neuro D fusion protein.

SELECT PRODUCT CITATIONS

1. Cantile, M., et al. 2005. cAMP induced modifications of HoxD gene expression in prostate cells allow the identification of a chromosomal area involved *in vivo* with neuroendocrine differentiation of human advanced prostate cancers. J. Cell. Physiol. 205: 202-210.
2. Cantile, M., et al. 2009. HOX D13 expression across 79 tumor tissue types. Int. J. Cancer 125: 1532-1541.
3. Cindolo, L., et al. 2011. Parallel determination of NeuroD1, chromogranin-A, KI67 and androgen receptor expression in surgically treated prostate cancers. Int. Braz J. Urol. 37: 57-66.
4. Briand, O., et al. 2012. The nuclear orphan receptor Nur77 is a lipotoxicity sensor regulating glucose-induced insulin secretion in pancreatic β-cells. Mol. Endocrinol. 26: 399-413.

RESEARCH USE

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