SANTA CRUZ BIOTECHNOLOGY, INC.

Neuro D (h): 293T Lysate: sc-159915

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.

REFERENCES

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2. Ellenberger, T., Fass, D., Arnaud, M. and Harrison, S.C. 1994. Crystal structure of transcription factor E47: E-box recognition by a basic region helix-loop-helix dimer. Genes Dev. 8: 970-980.
3. Ma, P.C., Rould, M.A., Weintraub, H. and Pabo, C.O. 1994. Crystal structure of MyoD bHLH domain-DNA complex: perspectives on DNA recognition and implications for transcriptional activation. Cell 77: 451-459.
4. Lee, J.E., Hollenberg, S.M., Snider, L., Turner, D.L., Lipnick, N. and Wein-traub, H. 1995. Conversion of *Xenopus* ectoderm into neurons by Neuro D, a basic helix-loop-helix protein. Science 268: 836-844.
5. Baudier, J., Bergeret, E., Bertacchi, N., Weintraub, H., Gagnon, J. and Garin, J. 1995. Interactions of myogenic bHLH transcription factors with calcium-binding calmodulin and S-100 ($\alpha\alpha$) proteins. Biochemistry 34: 7834-7846.
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CHROMOSOMAL LOCATION

Genetic locus: NEUROD1 (human) mapping to 2q31.3.

PRODUCT

Neuro D (h): 293T Lysate represents a lysate of human Neuro D transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

Neuro D (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Neuro D antibodies.

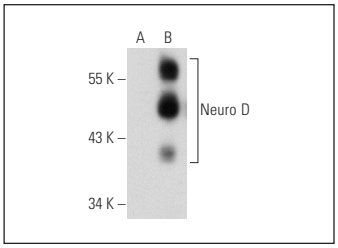
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Neuro D (A-10): sc-46684 is recommended as a positive control antibody for Western Blot analysis of enhanced human Neuro D expression in Neuro D transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



Neuro D (A-10): sc-46684. Western blot analysis of Neuro D expression in non-transfected: sc-117752 (**A**) and human Neuro D transfected: sc-159915 (**B**) 293T whole cell lysates.

PROTOCOLS

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