SANTA CRUZ BIOTECHNOLOGY, INC.

NELF-D (C-7): sc-393628

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NELF-D (negative elongation factor C/D), also known as TH1, NELF-C, HSPC130 or TH1L, is a 590 amino acid protein that localizes to the nucleus and exists as a component of the multi-protein NELF complex, a structure which negatively regulates Pol II-dependent transcription elongation. Expressed in a variety of tissues, including liver, heart, kidney, lung, brain, placenta and pancreas, NELF-D is involved in controlling transcriptional pausing of Pol II and may be able to induce chromatin unfolding, possibly playing a role in tumorigenesis. NELF-D is encoded by a gene which maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome. Additionally, chromosome 20 contains a region with numerous genes which are thought important for seminal production and may be potential targets for male contraception.

REFERENCES

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2. Narita, T., et al. 2003. Human transcription elongation factor NELF: identification of novel subunits and reconstitution of the functionally active complex. Mol. Cell. Biol. 23: 1863-1873.
3. Wu, C.H., et al. 2005. Molecular characterization of *Drosophila* NELF. Nucleic Acids Res. 33: 1269-1279.
4. Joó, J.G., et al. 2006. Trisomy 20 mosaicism and nonmosaic trisomy 20: a report of 2 cases. J. Reprod. Med. 51: 209-212.
5. Ville, D., et al. 2006. Early pattern of epilepsy in the RING chromosome 20 syndrome. Epilepsia 47: 543-549.
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7. Kazantsev, A.G. 2007. Cellular pathways leading to neuronal dysfunction and degeneration. Drug News Perspect. 20: 501-509.
8. Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. Asian J. Androl. 9: 540-544.

CHROMOSOMAL LOCATION

Genetic locus: NELFCD (human) mapping to 20q13.32; Nelfcd (mouse) mapping to 2 H4.

SOURCE

NELF-D (C-7) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of NELF-D of human origin.

RESEARCH USE

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

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.

APPLICATIONS

NELF-D (C-7) is recommended for detection of NELF-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 NELF-D siRNA (h): sc-75898, NELF-D siRNA (m): sc-149908, NELF-D shRNA Plasmid (h): sc-75898-SH, NELF-D shRNA Plasmid (m): sc-149908-SH, NELF-D shRNA (h) Lentiviral Particles: sc-75898-V and NELF-D shRNA (m) Lentiviral Particles: sc-149908-V.

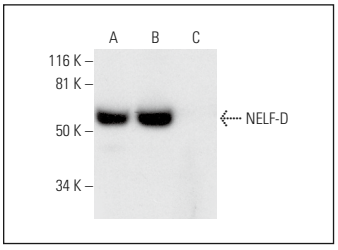
Molecular Weight of NELF-D: 59 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or MCF7 nuclear extract: sc-2149.

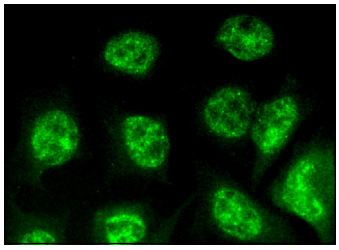
RECOMMENDED SUPPORT REAGENTS

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



NELF-D (C-7): sc-393628. Western blot analysis of NELF-D expression in HeLa (**A**), MCF7 (**B**) and NIH/3T3 (**C**) nuclear extracts. Note lack of reactivity with mouse NELF-D in lane **C**.



NELF-D (C-7): sc-393628. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

STORAGE

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