SANTA CRUZ BIOTECHNOLOGY, INC.

NVL (A-10): sc-393285

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Valosin containing protein (VCP), also designated TERA (for transitional endoplasmic reticulum ATPase), is a member of the AAA family of ATPases, which are involved in a variety of cellular activities. VCP is involved in a variety of membrane functions and in the regulation of the cell cycle. VCP associates with ubiquitinated IκB-α as well as with the 26S proteosome, indicating a potential role for VCP in the proteosome-mediated degradation of IκB-α. NVL (nuclear valosin-containing protein-like), also known as NVLp, is an 856 amino acid nuclear protein belonging to the AAA ATPase family. Implicated in ATP-dependent nuclear processes and ribosome synthesis, NVL exists as three alternatively spliced isoforms designated NVL isoform 1 (NVLp.2), NVL isoform 2 (NVLp.1) and NVL isoform 3. Widely expressed, NVL is found at highest levels in pancreas, retina, heart, skeletal muscle and placenta.

REFERENCES

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3. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602426. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Zhang, S.H., Liu, J., Kobayashi, R. and Tonks, N.K. 1999. Identification of the cell cycle regulator VCP (p97/CDC48) as a substrate of the band 4.1-related protein-tyrosine phosphatase PTPH1. J. Biol. Chem. 274: 17806-17812.
5. Scherl, A., Coute, Y., Deon, C., Calle, A., Kindbeiter, K., Sanchez, J.C., Greco, A., Hochstrasser, D. and Diaz, J.J. 2002. Functional proteomic analysis of human nucleolus. Mol. Biol. Cell 13: 4100-4109.
6. Nagahama, M., Hara, Y., Seki, A., Yamazoe, T., Kawate, Y., Shinohara, T., Hatsuzawa, K., Tani, K. and Tagaya, M. 2004. NVL2 is a nucleolar AAA-ATPase that interacts with ribosomal protein L5 through its nucleolar localization sequence. Mol. Biol. Cell 15: 5712-5723.

CHROMOSOMAL LOCATION

Genetic locus: NVL (human) mapping to 1q42.11; Nvl (mouse) mapping to 1 H4.

SOURCE

NVL (A-10) is a mouse monoclonal antibody raised against amino acids 405-482 mapping within an internal region of NVL of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

NVL (A-10) is recommended for detection of NVL 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 NVL siRNA (h): sc-88550, NVL siRNA (m): sc-106323, NVL shRNA Plasmid (h): sc-88550-SH, NVL shRNA Plasmid (m): sc-106323-SH, NVL shRNA (h) Lentiviral Particles: sc-88550-V and NVL shRNA (m) Lentiviral Particles: sc-106323-V.

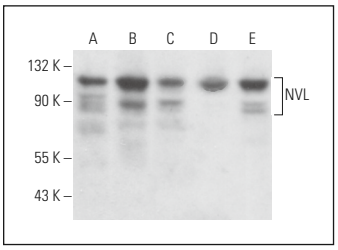
Molecular Weight of NVL: 95 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, MIA PaCa-2 cell lysate: sc-2285 or PC-12 cell lysate: sc-2250.

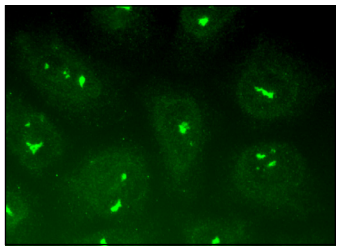
RECOMMENDED SUPPORT REAGENTS

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



NVL (A-10): sc-393285. Western blot analysis of NVL expression in MIA PaCa-2 (**A**), HeLa (**B**), SH-SY5Y (**C**), KNRK (**D**) and PC-12 (**E**) whole cell lysates.



NVL (A-10): sc-393285. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar and nuclear localization.

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.