

NVL (G-10): sc-393047

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 I κ B- α as well as with the 26S proteasome, indicating a potential role for VCP in the proteasome-mediated degradation of I κ B- 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

1. Egerton, M., et al. 1992. VCP, the mammalian homolog of cdc48, is tyrosine phosphorylated in response to T cell antigen receptor activation. *EMBO J.* 11: 3533-3540.
2. Germain-Lee, E.L., et al. 1997. NVL: a new member of the AAA family of ATPases localized to the nucleus. *Genomics* 44: 22-34.
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., et al. 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., et al. 2002. Functional proteomic analysis of human nucleolus. *Mol. Biol. Cell* 13: 4100-4109.

CHROMOSOMAL LOCATION

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

SOURCE

NVL (G-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 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NVL (G-10) is available conjugated to agarose (sc-393047 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393047 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393047 PE), fluorescein (sc-393047 FITC), Alexa Fluor® 488 (sc-393047 AF488), Alexa Fluor® 546 (sc-393047 AF546), Alexa Fluor® 594 (sc-393047 AF594) or Alexa Fluor® 647 (sc-393047 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393047 AF680) or Alexa Fluor® 790 (sc-393047 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NVL (G-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 μ g per 100-500 μ g 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.

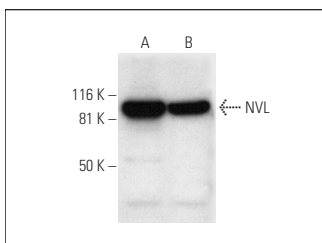
Molecular Weight of NVL: 95 kDa.

Positive Controls: JAR cell lysate: sc-2276 or MIA PaCa-2 cell lysate: sc-2285.

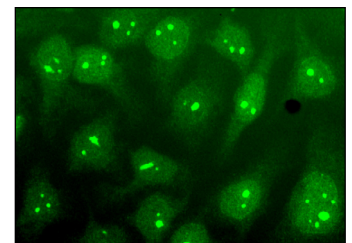
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 (G-10): sc-393047. Western blot analysis of NVL expression in JAR (A) and MIA PaCa-2 (B) whole cell lysates.



NVL (G-10): sc-393047. 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.

RESEARCH USE

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

PROTOCOLS

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