

Nrdp1 (FL-317): sc-98353

BACKGROUND

The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. Nrdp1, also known as RNF41 (RING finger protein 41), SBBI03 or FLRF, is a 317 amino acid protein that contains one RING-type zinc finger and one SIAH-type zinc finger. Expressed in testis, ovary and prostate, Nrdp1 functions as an E3 ubiquitin-protein ligase that, characteristic of E3 ligase proteins, accepts ubiquitin (in the form of a thioester) from an E2 ubiquitin-conjugating enzyme and transfers that ubiquitin residue to substrates targeted for degradation. Specifically, Nrdp1 interacts with ErbB-3 and UBPY, thereby targeting them for proteasomal degradation.

REFERENCES

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- Diamonti, A.J., et al. 2002. An RBCC protein implicated in maintenance of steady-state neuregulin receptor levels. *Proc. Natl. Acad. Sci. USA* 99: 2866-2871.
- Qiu, X.B. and Goldberg, A.L. 2002. Nrdp1/FLRF is a ubiquitin ligase promoting ubiquitination and degradation of the epidermal growth factor receptor family member, ErbB-3. *Proc. Natl. Acad. Sci. USA* 99: 14843-14848.
- Qiu, X.B., et al. 2004. Nrdp1-mediated degradation of the gigantic IAP, BRUCE, is a novel pathway for triggering apoptosis. *EMBO J.* 23: 800-810.
- Wu, X., et al. 2004. Stabilization of the E3 ubiquitin ligase Nrdp1 by the deubiquitinating enzyme USP8. *Mol. Cell. Biol.* 24: 7748-7757.
- Avvakumov, G.V., et al. 2006. Amino-terminal dimerization, Nrdp1-rhodanese interaction, and inhibited catalytic domain conformation of the ubiquitin-specific protease 8 (USP8). *J. Biol. Chem.* 281: 38061-38070.

CHROMOSOMAL LOCATION

Genetic locus: RNF41 (human) mapping to 12q13.2; Rnf41 (mouse) mapping to 10 D3.

SOURCE

Nrdp1 (FL-317) is a rabbit polyclonal antibody raised against amino acids 1-317 representing full length Nrdp1 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

Nrdp1 (FL-317) is recommended for detection of Nrdp1 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).

Nrdp1 (FL-317) is also recommended for detection of Nrdp1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Nrdp1 siRNA (h): sc-75956, Nrdp1 siRNA (m): sc-75957, Nrdp1 shRNA Plasmid (h): sc-75956-SH, Nrdp1 shRNA Plasmid (m): sc-75957-SH, Nrdp1 shRNA (h) Lentiviral Particles: sc-75956-V and Nrdp1 shRNA (m) Lentiviral Particles: sc-75957-V.

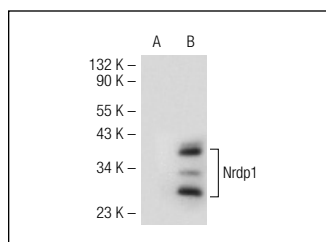
Molecular Weight of Nrdp1: 36 kDa.

Positive Controls: Nrdp1 (h): 293T Lysate: sc-115234 or PC-12 cell lysate: sc-2250.

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



Nrdp1 (FL-317): sc-98353. Western blot analysis of Nrdp1 expression in non-transfected: sc-117752 (A) and human Nrdp1 transfected: sc-115234 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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