

# Nrdp1 (A-6): sc-365622

## 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), SBB103 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

1. Abdullah, J.M., et al. 2001. FLRF, a novel evolutionarily conserved RING finger gene, is differentially expressed in mouse fetal and adult hematopoietic stem cells and progenitors. *Blood Cells Mol. Dis.* 27: 320-333.
2. 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.
3. 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.
4. 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.
5. Wu, X., et al. 2004. Stabilization of the E3 ubiquitin ligase Nrdp1 by the deubiquitinating enzyme USP8. *Mol. Cell. Biol.* 24: 7748-7757.

## CHROMOSOMAL LOCATION

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

## SOURCE

Nrdp1 (A-6) is a mouse monoclonal antibody raised against amino acids 1-317 representing full length Nrdp1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nrdp1 (A-6) is available conjugated to agarose (sc-365622 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365622 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365622 PE), fluorescein (sc-365622 FITC), Alexa Fluor® 488 (sc-365622 AF488), Alexa Fluor® 546 (sc-365622 AF546), Alexa Fluor® 594 (sc-365622 AF594) or Alexa Fluor® 647 (sc-365622 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365622 AF680) or Alexa Fluor® 790 (sc-365622 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

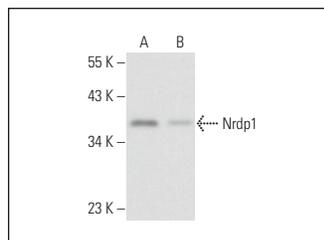
Nrdp1 (A-6) is recommended for detection of Nrdp1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for 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.

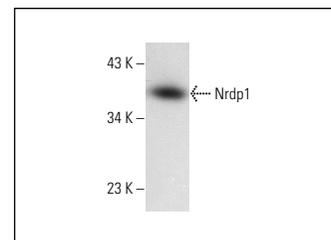
Molecular Weight of Nrdp1: 36 kDa.

Positive Controls: Hs 181 Tes whole cell lysate: sc-364779, THP-1 cell lysate: sc-2238 or ES-2 cell lysate: sc-24674.

## DATA



Nrdp1 (A-6): sc-365622. Western blot analysis of Nrdp1 expression in THP-1 (A) and ES-2 (B) whole cell lysates.



Nrdp1 (A-6): sc-365622. Western blot analysis of Nrdp1 expression in Hs 181 Tes whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Na, W., et al. 2019. TBX1 functions as a tumor suppressor in thyroid cancer through inhibiting the activities of PI3K/Akt and MAPK/ERK pathways. *Thyroid* 29: 378-394.
2. Steele, T., et al. 2021. Androgen receptor-mediated nuclear transport of Nrdp1 in prostate cancer cells is associated with worse patient outcomes. *Cancers* 13: 4425.
3. Luo, Z.Y., et al. 2023. Ubiquitin ligase Nrdp1 controls autophagy-associated acrosome biogenesis and mitochondrial arrangement during spermiogenesis. *Cells* 12: 2211.
4. Yang, H., et al. 2023. lncRNA LINC00960 promotes apoptosis by sponging ubiquitin ligase Nrdp1-targeting miR-183-5p. *Acta Biochim. Biophys. Sin.* 55: 91-102.

## 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.