

NDRG1 (A-5): sc-398823

BACKGROUND

The N-Myc downstream regulated gene (NDRG) family is comprised of four members, NDRG1 (also designated Drg1, RTP, rit42, Cap43 and Ndr1), NDRG2, NDRG3 and NDRG4, which share 57-65% homology. The NDRG1 gene, which maps to human chromosome 8q24.22, is evolutionarily conserved and is similarly regulated in humans, mice and rats. Like NDRG2 and NDRG3, NDRG1 is ubiquitously expressed, but it is expressed most prominently in placental membranes and prostate, kidney, small intestine and ovary tissue. NDRG1 gene expression is induced by several compounds, including nickel, and produces a protein involved in stress responses, hormone responses, cell growth and differentiation. The gene encoding NDRG3 maps to human chromosome 20q11.23 and is predominantly expressed in testis, prostate and ovary, which suggests it may play a role in spermatogenesis.

REFERENCES

1. van Belzen, N., et al. 1997. A novel gene which is up-regulated during colon epithelial cell differentiation and down-regulated in colorectal neoplasms. *Lab. Invest.* 77: 85-92.
2. Kurdistani, S.K., et al. 1998. Inhibition of tumor cell growth by RTP/rit42 and its responsiveness to p53 and DNA damage. *Cancer Res.* 58: 4439-4444.
3. Zhou, D., et al. 1998. Cap43, a novel gene specifically induced by Ni²⁺ compounds. *Cancer Res.* 58: 2182-2189.
4. Agarwala, K.L., et al. 2000. Phosphorylation of RTP, an ER stress-responsive cytoplasmic protein. *Biochem. Biophys. Res. Commun.* 272: 641-647.
5. Park, H., et al. 2000. Hypoxia induces the expression of a 43-kDa protein (PROXY-1) in normal and malignant cells. *Biochem. Biophys. Res. Commun.* 276: 321-338.
6. Zhou, R.H., et al. 2001. Characterization of the human NDRG gene family: a newly identified member, NDRG4, is specifically expressed in brain and heart. *Genomics* 73: 86-97.

CHROMOSOMAL LOCATION

Genetic locus: NDRG1 (human) mapping to 8q24.22; Ndr1 (mouse) mapping to 15 D2.

SOURCE

NDRG1 (A-5) is a mouse monoclonal antibody raised against amino acids 331-390 mapping at the C-terminus of NDRG1 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.

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.

APPLICATIONS

NDRG1 (A-5) is recommended for detection of NDRG1 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 NDRG1 siRNA (h): sc-36021, NDRG1 siRNA (m): sc-37267, NDRG1 shRNA Plasmid (h): sc-36021-SH, NDRG1 shRNA Plasmid (m): sc-37267-SH, NDRG1 shRNA (h) Lentiviral Particles: sc-36021-V and NDRG1 shRNA (m) Lentiviral Particles: sc-37267-V.

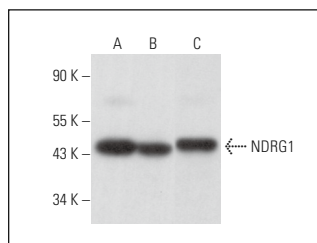
Molecular Weight of NDRG1: 43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caki-1 cell lysate: sc-2224 or LNCaP cell lysate: sc-2231.

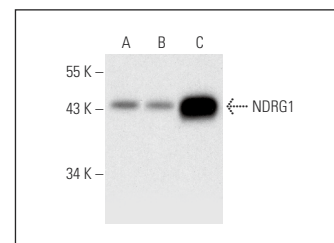
RECOMMENDED SUPPORT REAGENTS

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



NDRG1 (A-5): sc-398823. Western blot analysis of NDRG1 expression in HeLa (A) and KNRK (B) whole cell lysates and rat eye tissue extract (C).



NDRG1 (A-5): sc-398823. Western blot analysis of NDRG1 expression in HeLa (A), Caki-1 (B) and LNCaP (C) whole cell lysates.

PROTOCOLS

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