

NDRG1 (Y-20): sc-19466

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, which is 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

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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. Park, H., et al. 2000. Hypoxia induces the expression of a 43-kDa protein (PROXY-1) in normal and malignant cells. *Biochem. Biophys. Res. Comm.* 276: 321-338.
5. Agarwala, K.L., et al. 2000. Phosphorylation of RTP, an ER stress-responsive cytoplasmic protein. *Biochem. Biophys. Res. Commun.* 272: 641-647.
6. Zhao, W., et al. 2001. Cloning and expression pattern of the human NDRG3 gene. *Biochim. Biophys. Acta* 1519: 134-138.
7. 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; NdrG1 (mouse) mapping to 15 D2.

SOURCE

NDRG1 (Y-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NDRG1 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.

Blocking peptide available for competition studies, sc-19466 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NDRG1 (Y-20) is recommended for detection of NDRG1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

NDRG1 (Y-20) is also recommended for detection of NDRG1 in additional species, including equine, canine and porcine.

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: Caco-2 cell lysate: sc-2262.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.



Try **NDRG1 (B-5): sc-398291** or **NDRG1 (A-5): sc-398823**, our highly recommended monoclonal alternatives to NDRG1 (Y-20).