

NDRG1 (S-7): sc-100786

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 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 upregulated during colon epithelial cell differentiation and downregulated in colorectal neoplasms. *Lab. Invest.* 77: 85-92.
2. Zhou, D., et al. 1998. Cap43, a novel gene specifically induced by Ni²⁺ compounds. *Cancer Res.* 58: 2182-2189.
3. 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.

CHROMOSOMAL LOCATION

Genetic locus: NDRG1 (human) mapping to 8q24.22.

SOURCE

NDRG1 (S-7) is a mouse monoclonal antibody raised against recombinant NDRG1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NDRG1 (S-7) is recommended for detection of NDRG1 of 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), immunohistochemistry (including paraffin-embedded sections) (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 shRNA Plasmid (h): sc-36021-SH and NDRG1 shRNA (h) Lentiviral Particles: sc-36021-V.

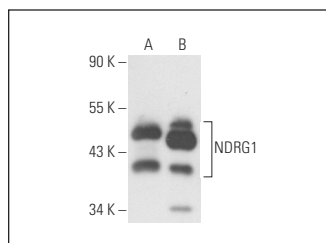
Molecular Weight of NDRG1: 43 kDa.

Positive Controls: NDRG1 (h2): 293T Lysate: sc-172022 or Caco-2 cell lysate: sc-2262.

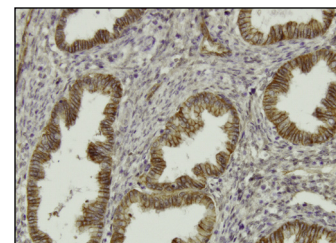
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



NDRG1 (S-7): sc-100786. Western blot analysis of NDRG1 expression in non-transfected: sc-117752 (A) and human NDRG1 transfected: sc-172022 (B) 293T whole cell lysates.



NDRG1 (S-7): sc-100786. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human endometrium tissue showing membrane and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Cheng, J., et al. 2011. NDRG1 as a biomarker for metastasis, recurrence and of poor prognosis in hepatocellular carcinoma. *Cancer Lett.* 310: 35-45.
2. Hosoya, N., et al. 2013. Proteomics identified nuclear N-myc downstream-regulated gene 1 as a prognostic tissue biomarker candidate in renal cell carcinoma. *Biochim. Biophys. Acta* 1834: 2630-2639.

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.