SANTA CRUZ BIOTECHNOLOGY, INC.

NDRG1 (N-19): sc-19464

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: NDRG1 (human) mapping to 8q24.22; Ndrg1 (mouse) mapping to 15 D2.

SOURCE

NDRG1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus 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-19464 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NDRG1 (N-19) 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), 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).

NDRG1 (N-19) is also recommended for detection of NDRG1 in additional species, including equine, canine, bovine 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.

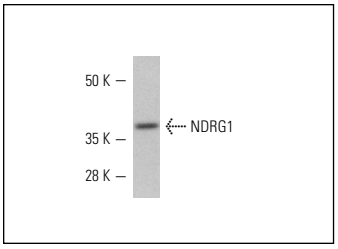
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

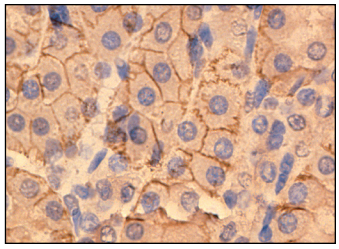
RESEARCH USE

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

DATA



NDRG1 (N-19): sc-19464. Western blot analysis of NDRG1 expression in Caco-2 whole cell lysate.



NDRG1 (N-19): sc-19464. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney tissue showing membrane and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Taketomi, Y., et al. 2007. Impaired mast cell maturation and degranulation and attenuated allergic responses in NDRG1-deficient mice. J. Immunol. 178: 7042-7053.
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3. Thomas, J.D. and Johannes, G.J. 2007. Identification of mRNAs that continue to associate with polysomes during hypoxia. RNA 13: 1116-1131.
4. Chen, J., et al. 2008. Correlation between NDRG1 and PTEN expression in endometrial carcinoma. Cancer Sci. 99: 706-710.
5. Strzelczyk, B., et al. 2009. Identification of high-risk stage II colorectal tumors by combined analysis of the NDRG1 gene expression and the depth of tumor invasion. Ann. Surg. Oncol. 16: 1287-1294.
6. Gerhard, R., et al. 2010. NDRG1 protein overexpression in malignant thyroid neoplasms. Clinics 65: 757-762.
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8. Tsui, K.H., et al. 2012. Growth differentiation factor-15 upregulates interleukin-6 to promote tumorigenesis of prostate carcinoma PC-3 cells. J. Mol. Endocrinol. 49: 153-163.
9. Goichon, A., et al. 2013. An enteral leucine supply modulates human duodenal mucosal proteome and decreases the expression of enzymes involved in fatty acid β-oxidation. J. Proteomics 78: 535-544.