

NDRG2 (E-20): sc-19468



The Power to Question

BACKGROUND

The N-myc downstream regulated gene (NDRG) family is comprised of four members, namely NDRG1, NDRG2, NDRG3 and NDRG4, all of which share 57-65% homology. NDRG2 (NDRG family member 2), also known as SYLD, is a 371 amino acid protein that localizes to both the cytoplasm and the perinuclear region in neurons. Expressed at high levels in heart, brain, dendritic cells, salivary gland and skeletal muscle and at lower levels in liver and kidney, NDRG2 is thought to be involved in dendritic and neuronal cell differentiation and outgrowth. Additionally, NDRG2 expression is downregulated in a variety of carcinomas, including liver cancer, pancreatic cancer and meningioma, suggesting a possible role for NDRG2 in tumor suppression. NDRG2 is found in brain lesions of Alzheimer Disease (AD)-affected patients and is thought to be associated with the progression of AD. Five isoforms of NDRG2 exist due to alternative splicing events.

REFERENCES

1. Qu, X., et al. 2002. Characterization and expression of three novel differentiation-related genes belong to the human NDRG gene family. *Mol. Cell. Biochem.* 229: 35-44.
2. Choi, S.C., et al. 2003. Expression and regulation of NDRG2 (N-Myc downstream regulated gene 2) during the differentiation of dendritic cells. *FEBS Lett.* 553: 413-418.
3. Deng, Y., et al. 2003. N-Myc downstream-regulated gene 2 (NDRG2) inhibits glioblastoma cell proliferation. *Int. J. Cancer* 106: 342-347.
4. Mitchelmore, C., et al. 2004. NDRG2: a novel Alzheimer's disease associated protein. *Neurobiol. Dis.* 16: 48-58.
5. Hu, X.L., et al. 2004. NDRG2 expression and mutation in human liver and pancreatic cancers. *World J. Gastroenterol.* 10: 3518-3521.

CHROMOSOMAL LOCATION

Genetic locus: NDRG2 (human) mapping to 14q11.2; Ndr2g (mouse) mapping to 14 C2.

SOURCE

NDRG2 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NDRG2 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-19468 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

NDRG2 (E-20) is recommended for detection of NDRG2 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).

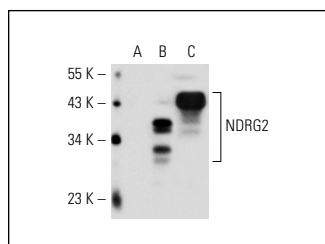
NDRG2 (E-20) is also recommended for detection of NDRG2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NDRG2 siRNA (h): sc-40757, NDRG2 siRNA (m): sc-40758, NDRG2 shRNA Plasmid (h): sc-40757-SH, NDRG2 shRNA Plasmid (m): sc-40758-SH, NDRG2 shRNA (h) Lentiviral Particles: sc-40757-V and NDRG2 shRNA (m) Lentiviral Particles: sc-40758-V.

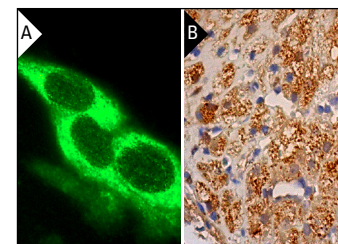
Molecular Weight of NDRG2: 41 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or NDRG2 (h2): 293 Lysate: sc-112722.

DATA



NDRG2 (E-20): sc-19468. Western blot analysis of NDRG2 expression in non-transfected: sc-110760 (A) and human NDRG2 transfected: sc-112722 (B) 293 whole cell lysates and mouse brain tissue extract (C).



NDRG2 (E-20): sc-19468. Immunofluorescence staining of methanol-fixed SK-N-SH cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Hummerich, L., et al. 2006. Identification of novel tumour-associated genes differentially expressed in the process of squamous cell cancer development. *Oncogene* 25: 111-121.
2. Foletta, V.C., et al. 2009. NDRG2, a novel regulator of myoblast proliferation, is regulated by anabolic and catabolic factors. *J. Physiol.* 587: 1619-1634.
3. Liu, S., et al. 2010. NDRG2 induced by oxidized LDL in macrophages antagonizes growth factor productions via selectively inhibiting ERK activation. *Biochim. Biophys. Acta* 1801: 106-113.

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Try **NDRG2 (B-10): sc-376202** or **NDRG2 (E-4): sc-365080**, our highly recommended monoclonal alternatives to NDRG2 (E-20).