

NDRG2 (B-10): sc-376202

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; Ndr2 (mouse) mapping to 14 C2.

SOURCE

NDRG2 (B-10) is a mouse monoclonal antibody raised against amino acids 104-143 mapping within an internal region of NDRG2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NDRG2 (B-10) is available conjugated to agarose (sc-376202 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376202 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376202 PE), fluorescein (sc-376202 FITC), Alexa Fluor® 488 (sc-376202 AF488), Alexa Fluor® 546 (sc-376202 AF546), Alexa Fluor® 594 (sc-376202 AF594) or Alexa Fluor® 647 (sc-376202 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376202 AF680) or Alexa Fluor® 790 (sc-376202 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NDRG2 (B-10) is recommended for detection of NDRG2 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), 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 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.

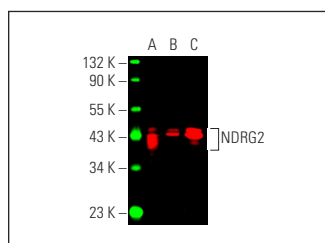
Molecular Weight of NDRG2: 41 kDa.

Positive Controls: human brain extract: sc-364375, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

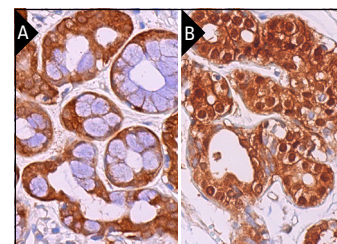
RECOMMENDED SUPPORT REAGENTS

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



NDRG2 (B-10) Alexa Fluor® 790: sc-376202 AF790. Direct near-infrared western blot analysis of NDRG2 expression in human brain (A), mouse brain (B) and rat brain (C) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 680: sc-516730.



NDRG2 (B-10): sc-376202. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing cytoplasmic and nuclear staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and nuclear staining of glandular cells and myoepithelial cells (B).

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.