# NDRG2 (h2): 293 Lysate: sc-112722



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's 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**

- Qu, X., Zhai, Y., Wei, H., Zhang, C., Xing, G., Yu, Y. and He, F. 2002. Characterization and expression of three novel differentiation-related genes belong to the human NDRG gene family. Mol. Cell. Biochem. 229: 35-44.
- Choi, S.C., Kim, K.D., Kim, J.T., Kim, J.W., Yoon, D.Y., Choe, Y.K., Chang, Y.S., Paik, S.G. and Lim, J.S. 2003. Expression and regulation of NDRG2 (N-Myc downstream regulated gene 2) during the differentiation of dendritic cells. FEBS Lett. 553: 413-418.
- Deng, Y., Yao, L., Chau, L., Ng, S.S., Peng, Y., Liu, X., Au, W.S., Wang, J., Li, F., Ji, S., Han, H., Nie, X., Li, Q., Kung, H.F., Leung, S.Y. and Lin, M.C. 2003.
  N-Myc downstream-regulated gene 2 (NDRG2) inhibits glioblastoma cell proliferation. Int. J. Cancer 106: 342-347.
- Mitchelmore, C., Büchmann-Møller, S., Rask, L., West, M.J., Troncoso, J.C. and Jensen, N.A. 2004. NDRG2: a novel Alzheimer's disease associated protein. Neurobiol. Dis. 16: 48-58.
- 5. Hu, X.L., Liu, X.P., Lin, S.X., Deng, Y.C., Liu, N., Li, X. and Yao, L.B. 2004. NDRG2 expression and mutation in human liver and pancreatic cancers. World J. Gastroenterol. 10: 3518-3521.
- 6. Lusis, E.A., Watson, M.A., Chicoine, M.R., Lyman, M., Roerig, P., Reifenberger, G., Gutmann, D.H. and Perry, A. 2005. Integrative genomic analysis identifies NDRG2 as a candidate tumor suppressor gene frequently inactivated in clinically aggressive meningioma. Cancer Res. 65: 7121-7126.
- 7. Lorentzen, A., Vogel, L.K., Lewinsky, R.H., Saebø, M., Skjelbred, C.F., Godiksen, S., Hoff, G., Tveit, K.M., Lothe, I.M., Ikdahl, T., Kure, E.H. and Mitchelmore, C. 2007. Expression of NDRG2 is down-regulated in highrisk adenomas and colorectal carcinoma. BMC Cancer 7: 192.
- 8. Wang, L., Liu, N., Yao, L., Li, F., Zhang, J., Deng, Y., Liu, J., Ji, S., Yang, A., Han, H., Zhang, Y., Zhang, J., Han, W. and Liu, X. 2008. NDRG2 is a new HIF-1 target gene necessary for hypoxia-induced apoptosis in A549 cells. Cell. Physiol. Biochem. 21: 239-250.

# **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

#### **CHROMOSOMAL LOCATION**

Genetic locus: NDRG2 (human) mapping to 14q11.2.

### **PRODUCT**

NDRG2 (h2): 293 Lysate represents a lysate of human NDRG2 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

#### **APPLICATIONS**

NDRG2 (h2): 293 Lysate is suitable as a Western Blotting positive control for human reactive NDRG2 antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

# **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.

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**