

NDRG4 (C-8): sc-514144



The Power to Question

BACKGROUND

The N-Myc downstream regulated gene (NDRG) family is comprised of 4 members, namely NDRG1, NDRG2, NDRG3 and NDRG4, all of which share 57-65% homology. NDRG4 (NDRG family member 4), also known as SMAP-8 (smooth muscle-associated protein 8) or BDM1 (brain development-related molecule 1), is a 352 amino acid cytoplasmic protein that belongs to the NDRG family. Expressed specifically in brain and heart, NDRG4 is thought to function as a regulator of mitogenic signaling in vascular smooth muscle cells. Additionally, NDRG4 may play a role in early postnatal development and may mediate the differentiation and subsequent function of neuronal cells. NDRG4 is expressed as six isoforms (the first three of which are designated NDRG4-BVar, NDRG4-B and NDRG4-H) due to alternative splicing events.

REFERENCES

1. Zhou, R.H., et al. 2001. Characterization of the human NDRG gene family: a newly identified member, NDRG4, is specifically expressed in brain and heart. *Genomics* 73: 86-97.
2. Ohki, T., et al. 2002. Inhibition of neurite outgrowth by reduced level of NDRG4 protein in antisense transfected PC12 cells. *Brain Res. Dev. Brain Res.* 135: 55-63.
3. 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.

CHROMOSOMAL LOCATION

Genetic locus: NDRG4 (human) mapping to 16q21; NdrG4 (mouse) mapping to 8 D1.

SOURCE

NDRG4 (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 170-192 within an internal region of NDRG4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NDRG4 (C-8) is available conjugated to agarose (sc-514144 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514144 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514144 PE), fluorescein (sc-514144 FITC), Alexa Fluor® 488 (sc-514144 AF488), Alexa Fluor® 546 (sc-514144 AF546), Alexa Fluor® 594 (sc-514144 AF594) or Alexa Fluor® 647 (sc-514144 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514144 AF680) or Alexa Fluor® 790 (sc-514144 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514144 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

NDRG4 (C-8) is recommended for detection of NDRG4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NDRG4 siRNA (h): sc-93374, NDRG4 siRNA (m): sc-149865, NDRG4 shRNA Plasmid (h): sc-93374-SH, NDRG4 shRNA Plasmid (m): sc-149865-SH, NDRG4 shRNA (h) Lentiviral Particles: sc-93374-V and NDRG4 shRNA (m) Lentiviral Particles: sc-149865-V.

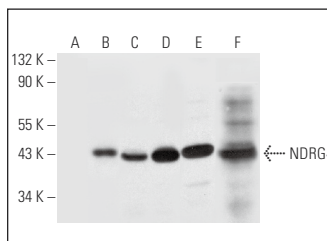
Molecular Weight of NDRG4 isoforms 1-6: 37-43 kDa.

Positive Controls: NDRG4 (h2): 293T Lysate: sc-129235, CCRF-CEM cell lysate: sc-2225 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



NDRG4 (C-8): sc-514144. Western blot analysis of NDRG4 expression in non-transfected 293T: sc-117752 (A), human NDRG4 transfected 293T: sc-129235 (B), Jurkat (C), CCRF-CEM (D), Hep G2 (E) and IMR-32 (F) whole cell lysates.

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.