

NDRG3 (H-11): sc-514561

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 8q24.3, 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, which is 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.

REFERENCES

1. van Belzen, N., et al. 1997. A novel gene which is up-regulated during colon epithelial cell differentiation and down-regulated in colorectal neoplasms. *Lab. Invest.* 77: 85-92.
2. Zhou, D., et al. 1998. Cap43, a novel gene specifically induced by Ni²⁺ compounds. *Cancer Res.* 58: 2182-2189.

CHROMOSOMAL LOCATION

Genetic locus: NDRG3 (human) mapping to 20q11.23; Ndr3 (mouse) mapping to 2 H1.

SOURCE

NDRG3 (H-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-26 at the N-terminus of NDRG3 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.

NDRG3 (H-11) is available conjugated to agarose (sc-514561 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514561 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514561 PE), fluorescein (sc-514561 FITC), Alexa Fluor[®] 488 (sc-514561 AF488), Alexa Fluor[®] 546 (sc-514561 AF546), Alexa Fluor[®] 594 (sc-514561 AF594) or Alexa Fluor[®] 647 (sc-514561 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514561 AF680) or Alexa Fluor[®] 790 (sc-514561 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514561 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

NDRG3 (H-11) is recommended for detection of NDRG3 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).

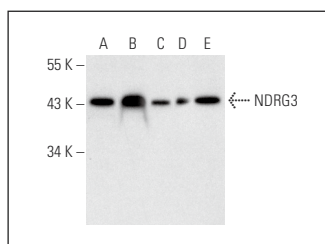
Suitable for use as control antibody for NDRG3 siRNA (h): sc-40759, NDRG3 siRNA (m): sc-40760, NDRG3 shRNA Plasmid (h): sc-40759-SH, NDRG3 shRNA Plasmid (m): sc-40760-SH, NDRG3 shRNA (h) Lentiviral Particles: sc-40759-V and NDRG3 shRNA (m) Lentiviral Particles: sc-40760-V.

Positive Controls: LNCaP cell lysate: sc-2231, Raji whole cell lysate: sc-364236 or HeLa whole cell lysate: sc-2200.

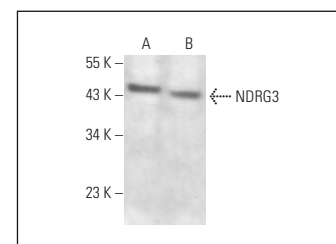
RECOMMENDED SUPPORT REAGENTS

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.

DATA



NDRG3 (H-11): sc-514561. Western blot analysis of NDRG3 expression in Raji (A), LNCaP (B), K-562 (C), HeLa (D) and Jurkat (E) whole cell lysates.



NDRG3 (H-11): sc-514561. Western blot analysis of NDRG3 expression in Raji (A) and 3T3-L1 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yu, J., et al. 2019. SNHG20/miR-140-5p/NDRG3 axis contributes to 5-fluorouracil resistance in gastric cancer. *Oncol. Lett.* 18: 1337-1343.
2. Nakamura, K., et al. 2021. Proteome dynamics at broken replication forks reveal a distinct ATM-directed repair response suppressing DNA double-strand break ubiquitination. *Mol. Cell* 81: 1084-1099.e6.

RESEARCH USE

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