

DRG1 (F-5): sc-390620

BACKGROUND

DRG1 (developmentally regulated GTP binding protein 1), also known as NEDD3 (neural precursor cell expressed developmentally down-regulated protein 3), is a 367 amino acid protein that localizes to the cytoplasm and belongs to the GTP1/OBG family. Expressed at high levels in heart, kidney and skeletal muscle and at lower levels in brain, liver, placenta, lung, colon and spleen, DRG1 binds to TAL1 and TAL2 and is thought to play a role in cell proliferation and differentiation, as well as in apoptosis, suggesting a role in tumor formation and metastasis. DRG1 is subject to polyubiquitination and sumoylation, the former of which induces proteolytic degradation. The gene encoding DRG1 maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

1. Sazuka, T., et al. 1992. DRG: a novel developmentally regulated GTP-binding protein. *Biochem. Biophys. Res. Commun.* 189: 363-370.
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3. Schenker, T., et al. 1994. A novel GTP-binding protein which is selectively repressed in SV40 transformed fibroblasts. *J. Biol. Chem.* 269: 25447-25453.
4. Mahajan, M.A., et al. 1996. Association of a novel GTP binding protein, DRG, with TAL oncogenic proteins. *Oncogene* 12: 2343-2350.
5. Li, B. and Trueb, B. 2000. DRG represents a family of two closely related GTP-binding proteins. *Biochim. Biophys. Acta* 1491: 196-204.
6. Bandyopadhyay, S., et al. 2003. The Drg-1 gene suppresses tumor metastasis in prostate cancer. *Cancer Res.* 63: 1731-1736.
7. Bandyopadhyay, S., et al. 2004. Role of the putative tumor metastasis suppressor gene Drg-1 in breast cancer progression. *Oncogene* 23: 5675-5681.
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CHROMOSOMAL LOCATION

Genetic locus: DRG1 (human) mapping to 22q12.2; Drg1 (mouse) mapping to 11 A1.

SOURCE

DRG1 (F-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 329-360 near the C-terminus of DRG1 of human origin.

PRODUCT

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

APPLICATIONS

DRG1 (F-5) is recommended for detection of DRG1 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).

DRG1 (F-5) is also recommended for detection of DRG1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DRG1 siRNA (h): sc-62240, DRG1 siRNA (m): sc-62241, DRG1 shRNA Plasmid (h): sc-62240-SH, DRG1 shRNA Plasmid (m): sc-62241-SH, DRG1 shRNA (h) Lentiviral Particles: sc-62240-V and DRG1 shRNA (m) Lentiviral Particles: sc-62241-V.

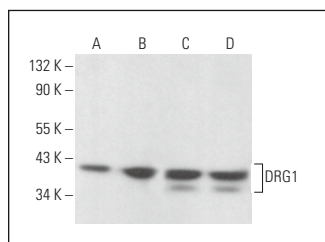
Molecular Weight of DRG1: 43 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, Hep G2 cell lysate: sc-2227 or Hs 732.Sk/Mu whole cell lysate: sc-364362.

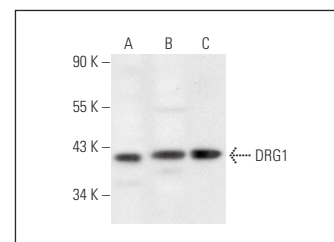
RECOMMENDED SUPPORT REAGENTS

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



DRG1 (F-5): sc-390620. Western blot analysis of DRG1 expression in Hep G2 (A), HeLa (B), AT3B-1 (C) and NIH/3T3 (D) whole cell lysates.



DRG1 (F-5): sc-390620. Western blot analysis of DRG1 expression in Hs 732.Sk/Mu (A), PC-12 (B) and Hep G2 (C) 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.