

DRG1 (N-18): sc-68321

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.
2. Sazuka, T., et al. 1992. Expression of DRG during murine embryonic development. *Biochem. Biophys. Res. Commun.* 189: 371-377.
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 DRG1 gene suppresses tumor metastasis in prostate cancer. *Cancer Res.* 63: 1731-1736.

CHROMOSOMAL LOCATION

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

SOURCE

DRG1 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of DRG1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68321 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

DRG1 (N-18) is recommended for detection of DRG1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 (N-18) is also recommended for detection of DRG1 in additional species, including equine, canine, bovine, porcine and avian.

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.

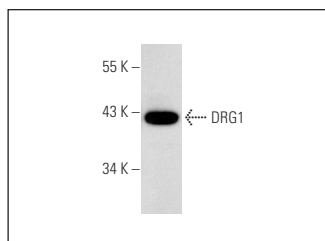
Molecular Weight of DRG1: 43 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



DRG1 (N-18): sc-68321. Western blot analysis of DRG1 expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Ruqia Mehmood, B., et al. 2012. Association of differentiation-related gene-1 (DRG1) with breast cancer survival and *in vitro* impact of DRG1 suppression. *Cancers* 4: 658-672.

RESEARCH USE

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