SANTA CRUZ BIOTECHNOLOGY, INC.

Neurofibromin (D): sc-67

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neurofibromatosis type 1 (NF1), or von Reckinghausen neurofibromatosis, is one of the most common autosomal dominant disorders in humans. Early linkage analysis mapped the NF1 gene to chromosome 17. The predicted NF1 transcript encodes the 2,818 amino acid protein Neurofibromin, also designated NF1-GAP-related protein (NF1GRP). By sequence analysis, similarity has been demonstrated within a small region of Neurofibromin and members of the Ras GAP gene family. Functionally, Neurofibromin has been shown by biochemical analysis involving RAS-GAP hydrolysis and functional complementation in yeast to further resemble GAP protein. The Neurofibromin protein is expressed at relatively constant levels in a broad range of cell lines and tissues including brain, lung, liver, kidney, spleen, muscle and colon. Although little is known regarding the function of Neurofibromin, the homology with the catalytic domain of proteins with GTPase activity suggests that Neurofibromin may also interact *in vivo* with Ras proteins.

CHROMOSOMAL LOCATION

Genetic locus: NF1 (human) mapping to 17q11.2; Nf1 (mouse) mapping to 11 B5.

SOURCE

Neurofibromin (D) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within the C-terminus of Neurofibromin of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Neurofibromin (D) is available conjugated to agarose (sc-67 AC), 500 µg /0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-67 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Neurofibromin (D) is recommended for detection of Neurofibromin 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 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Neurofibromin (D) is also recommended for detection of Neurofibromin in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for Neurofibromin siRNA (h): sc-36036, Neurofibromin siRNA (m): sc-36037, Neurofibromin shRNA Plasmid (h): sc-36036-SH, Neurofibromin shRNA Plasmid (m): sc-36037-SH, Neurofibromin shRNA (h) Lentiviral Particles: sc-36036-V and Neurofibromin shRNA (m) Lentiviral Particles: sc-36037-V.

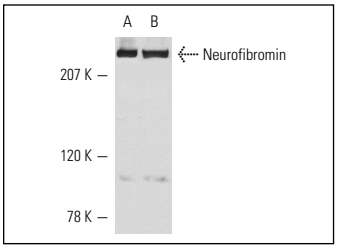
Molecular Weight of Neurofibromin: 250 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

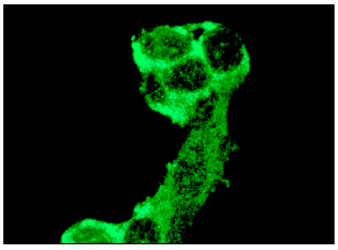
STORAGE

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

DATA



Neurofibromin (D): sc-67. Western blot analysis of Neurofibromin expression in A-431 (**A**) and HeLa (**B**) whole cell lysates.



Neurofibromin (D): sc-67. Immunofluorescence staining of methanol-fixed SK-N-SH cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

1. Yla-Outinen, H., et al. 1998. Upregulation of tumor suppressor protein neurofibromin in normal human wound healing and *in vitro* evidence for platelet derived growth factor (PDGF) and transforming growth factor-β1 (TGFβ1) elicited increase in neurofibromin mRNA steady-state levels in. J. Invest. Dermatol. 110: 232-237.
2. Hirvonen, O., et al. 1998. Developmental regulation of NF tumor suppressor gene in human peripheral nerve. J. Neurocytol. 27: 939-952.
3. Godin, F., et al. 2012. A fraction of neurofibromin interacts with PML bodies in the nucleus of the CCF astrocytoma cell line. Biochem. Biophys. Res. Commun. 418: 689-694.
4. Reuss, D.E., et al. 2013. Sensitivity of malignant peripheral nerve sheath tumor cells to TRAIL is augmented by loss of NF1 through modulation of MYC/MAD and is potentiated by curcumin through induction of ROS. PLoS ONE 8: e57152.
5. Kazmi, S.J., et al. 2013. Transgenic mice overexpressing neuregulin-1 model neurofibroma-malignant peripheral nerve sheath tumor progression and implicate specific chromosomal copy number variations in tumorigenesis. Am. J. Pathol. 182: 646-667.
6. Hollstein, P.E. and Cichowski, K. 2013. Identifying the ubiquitin ligase complex that regulates the NF1 tumor suppressor and Ras. Cancer Discov. 3: 880-893.

RESEARCH USE

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