SANTA CRUZ BIOTECHNOLOGY, INC.

Neurofibromin (McNFn27b): sc-20016

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.

REFERENCES

1. Riccardi, V.M., et al. 1986. Neurofibromatosis: Phenotype, Natural History, and Pathogenesis. Johns Hopkins Univ. Press, Baltimore.
2. Goldgar, D.E., et al. 1989. Multipoint linkage analysis in neurofibromatosis type 1: an international collaboration. Am. J. Hum. Genet. 44: 6-12.

CHROMOSOMAL LOCATION

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

SOURCE

Neurofibromin (McNFn27b) is a mouse monoclonal antibody raised against amino acids 27-41 corresponding to an N-terminal peptide of Neurofibromin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Neurofibromin (McNFn27b) 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), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

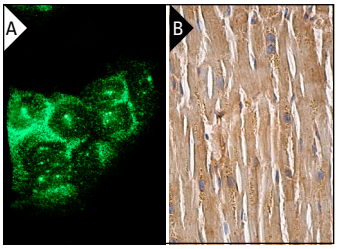
Molecular Weight of Neurofibromin: 250 kDa.

Positive Controls: H4 cell lysate: sc-2408, A-431 whole cell lysate: sc-2201 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) 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. 3) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Neurofibromin (McNFn27b): sc-20016. Immunofluorescence staining of methanol-fixed H4 cells showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes (**B**).

SELECT PRODUCT CITATIONS

1. Arun, V., et al. 2013. A novel Neurofibromin (NF1) interaction with the leucine-rich pentatricopeptide repeat motif-containing protein links neurofibromatosis type 1 and the French Canadian variant of Leigh's syndrome in a common molecular complex. J. Neurosci. Res. 91: 494-505.
2. Peta, C., et al. 2020. Nuclear isoforms of neurofibromin are required for proper spindle organization and chromosome segregation. Cells 9: 2348.
3. Luna, E.B., et al. 2021. Neurofibromin expression by normal salivary glands. Head Face Med. 17: 5.

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.

CONJUGATES

See **Neurofibromin (H-12): sc-376886** for Neurofibromin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.