

NF2 (A-19): sc-331



The Power to Question

BACKGROUND

Neurofibromatosis type 2 (NF2) is a dominantly inherited disorder characterized by the occurrence of bilateral vestibular schwannomas and other central nervous system tumors, including multiple meningiomas. NF2 occurs in about 1 of 40,000 live births. The NF2 gene is highly penetrant; NF2-affected individuals have a 95% chance of developing bilateral vestibular schwannomas. NF2 is distinct from NF1, which is characterized by an incidence of 1 in 4,000, maps to chromosome 17 and encodes a protein designated Neurofibromin, which is a large protein with a GAP domain. Genetic linkage studies of both sporadic and familial tumors suggest that NF2 is caused by inactivation of a tumor suppressor gene that maps on chromosome 22q12.2 and encodes a 595 amino acid protein whose function appears to be mediated by interaction with the cytoskeleton.

CHROMOSOMAL LOCATION

Genetic locus: NF2 (human) mapping to 22q12.2; Nf2 (mouse) mapping to 11 A1.

SOURCE

NF2 (A-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of NF2 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-331 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NF2 (A-19) is recommended for detection of NF2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NF2 (A-19) is also recommended for detection of NF2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NF2 siRNA (h): sc-36052, NF2 siRNA (m): sc-36053, NF2 shRNA Plasmid (h): sc-36052-SH, NF2 shRNA Plasmid (m): sc-36053-SH, NF2 shRNA (h) Lentiviral Particles: sc-36052-V and NF2 shRNA (m) Lentiviral Particles: sc-36053-V.

Molecular Weight of NF2: 70 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

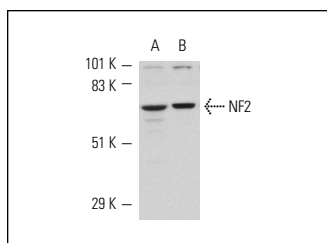
STORAGE

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

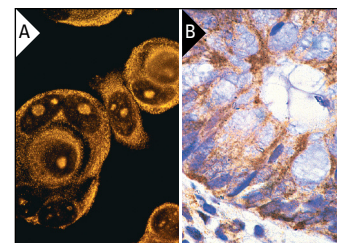
RESEARCH USE

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

DATA



NF2 (A-19): sc-331. Western blot analysis of NF2 expression in MCF7 (A) and Jurkat (B) whole cell lysates.



NF2 (A-19): sc-331. Rhodamine immunofluorescence staining of methanol-fixed MCF7 cells showing diffuse as well as localized cytoplasmic staining (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human colon showing localized staining within the cytoplasm (B).

SELECT PRODUCT CITATIONS

- Schmucker, B., et al. 1999. Novel alternatively spliced isoforms of the neurofibromatosis type 2 tumor suppressor are targeted to the nucleus and cytoplasmic granules. *Hum. Mol. Genet.* 8: 1561-1570.
- Lallemand, D., et al. 2009. Tumor-suppression functions of merlin are independent of its role as an organizer of the actin cytoskeleton in Schwann cells. *J. Cell Sci.* 122: 4141-4149.
- Lallemand, D., et al. 2009. Merlin regulates transmembrane receptor accumulation and signaling at the plasma membrane in primary mouse Schwann cells and in human schwannomas. *Oncogene* 28: 854-865.
- Petermann, A., et al. 2010. Loss of the protein-tyrosine phosphatase DEP-1/PTPRJ drives meningioma cell motility. *Brain Pathol.* 21: 405-418.
- Benhamouche, S., et al. 2010. NF2/Merlin controls progenitor homeostasis and tumorigenesis in the liver. *Genes Dev.* 24: 1718-1730.
- Sosa-García, B., et al. 2010. A role for the retinoblastoma protein as a regulator of mouse osteoblast cell adhesion: implications for osteogenesis and osteosarcoma formation. *PLoS ONE* 5: e13954.
- Schulz, A., et al. 2010. Merlin inhibits neurite outgrowth in the CNS. *J. Neurosci.* 30: 10177-10186.
- Morrow, K.A., et al. 2011. Loss of tumor suppressor Merlin in advanced breast cancer is due to post-translational regulation. *J. Biol. Chem.* 286: 40376-40385.



Try **NF2 (B-12): sc-55575** or **NF2 (E-2): sc-55574**, our highly recommended monoclonal alternatives to NF2 (A-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **NF2 (B-12): sc-55575**.