BACKGROUND
Neurofibromatosis type 1 (NF1), or von Recklinghausen 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 a 2,818 amino acid protein designated NF1GRP. By sequence analysis, similarity has been demonstrated within a small region of NF1GRP and members of the Ras GAP gene family. Functionally, NF1GRP was shown by biochemical analysis involving RAS-GAP hydrolysis and functional complementation in yeast to further resemble GAP protein. The NF1 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 NF1GRP, the homology with the catalytic domain of proteins with GTPase activity suggests that the NF1GRP 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 (McNFn27a) 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 IgG1 kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS
Neurofibromin (McNFn27a) 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 1:50, 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-36337, Neurofibromin shRNA Plasmid (h): sc-36038-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:

DATA
Neurofibromin (McNFn27a): sc-20017. Western blot analysis of Neurofibromin expression in NF1 knockout (A), rat (B) and human (C) Schwann cells. Kindly provided by Dr. David Muir, University of Florida College of Medicine.

Neurofibromin (McNFn27a): sc-20017. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatic sinusoids.

SELECT PRODUCT CITATIONS

PROTOCOLS
See our web site at www.scbt.com for detailed protocols and support products.

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