

ZNRF1 (S-20): sc-82464

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. ZNRF1 (zinc and ring finger 1), also known as NIN283, is a 227 amino acid protein that contains one RING-type zinc finger and localizes to the lysosome and the endosome, as well as to cytoplasmic vesicles and the peripheral membrane. Expressed primarily in nervous system tissue, but also present in testis and thymus, ZNRF1 functions as an E3 ubiquitin-protein ligase that is thought to play a role in the establishment and maintenance of neuronal plasticity. Multiple isoforms of ZNRF1 exist due to alternative splicing events.

REFERENCES

1. Borden, K.L. and Freemont, P.S. 1996. The RING finger domain: a recent example of a sequence-structure family. *Curr. Opin. Struct. Biol.* 6: 395-401.
2. Sun, Y., Tan, M., Duan, H. and Swaroop, M. 2001. SAG/ROC/Rbx/Hrt, a zinc RING finger gene family: molecular cloning, biochemical properties, and biological functions. *Antioxid. Redox Signal.* 3: 635-650.
3. Araki, T., Nagarajan, R. and Milbrandt, J. 2001. Identification of genes induced in peripheral nerve after injury. Expression profiling and novel gene discovery. *J. Biol. Chem.* 276: 34131-34141.
4. Araki, T. and Milbrandt, J. 2003. ZNRF proteins constitute a family of presynaptic E3 ubiquitin ligases. *J. Neurosci.* 23: 9385-9394.
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CHROMOSOMAL LOCATION

Genetic locus: ZNRF1 (human) mapping to 16q23.1; Znr1 (mouse) mapping to 8 E1.

SOURCE

ZNRF1 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ZNRF1 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-82464 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

ZNRF1 (S-20) is recommended for detection of ZNRF1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ZNRF1 (S-20) is also recommended for detection of ZNRF1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ZNRF1 siRNA (h): sc-77012, ZNRF1 siRNA (m): sc-77013, ZNRF1 shRNA Plasmid (h): sc-77012-SH, ZNRF1 shRNA Plasmid (m): sc-77013-SH, ZNRF1 shRNA (h) Lentiviral Particles: sc-77012-V and ZNRF1 shRNA (m) Lentiviral Particles: sc-77013-V.

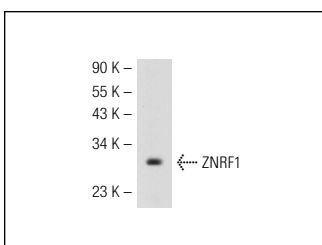
Molecular Weight of ZNRF1: 24 kDa.

Positive Controls: mouse brain extract: sc-2253.

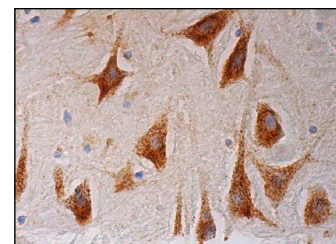
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ZNRF1 (S-20): sc-82464. Western blot analysis of ZNRF1 expression in mouse brain tissue extract.



ZNRF1 (S-20): sc-82464. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells and glial cells.

RESEARCH USE

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

PROTOCOLS

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