SANTA CRUZ BIOTECHNOLOGY, INC.

Nap-22 (M-65): sc-66995

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neuronal axonal membrane protein Nap-22, also designated neuronal tissue-enriched acidic protein or brain acid soluble protein (BASP1), is a Ca^{2+}-dependent calmodulin-binding protein that is important for neuronal sprouting and plasticity. Nap-22 is abundant in brain nerve terminals and is also present in significant amounts in kidney, testis and lymphoid tissue. Nap-22 undergoes N-terminal myristoylation for membrane localization. It has been characterized as a major protein of neuronal rafts, which are known to preferentially bind membranes containing cholesterol. Nap-22 is a crucial protein active in neurite outgrowth and synaptic plasticity.

REFERENCES

1. Mosevitsky, M.I., et al. 1997. The BASP1 family of myristoylated proteins abundant in axonal termini. Primary structure analysis and physico-chemical properties. Biochimie 79: 373-384.
2. Park, S., et al. 1998. Characterization of bovine and human cDNAs encoding Nap-22 (22 kDa neuronal tissue-enriched acidic protein) homologs. Mol. Cell 8: 471-477.
3. Zakharov, VV., et al. 2003. Natural N-terminal fragments of brain abundant myristoylated protein BASP1. Biochim. Biophys. Acta 1622: 14-19.
4. Epand, RM., et al. 2004. Cholesterol-dependent partitioning of PtdIns(4,5)P2 into membrane domains by the N-terminal fragment of Nap-22 (neuronal axonal myristoylated membrane protein of 22 kDa). Biochem. J. 379: 527-532.
5. Iino, S., et al. 2004. Motor, sensory and autonomic nerve terminals containing Nap-22 immunoreactivity in the rat muscle. Brain Res. 1002: 142-150.
6. Epand, R.F., et al. 2005. Induction of raft-like domains by a myristoylated Nap-22 peptide and its Tyr mutant. FEBS J. 272: 1792-1803.
7. Mosevitsky, M.I. 2005. Nerve ending "signal" proteins GAP-43, MARCKS and BASP1. Int. Rev. Cytol. 245: 245-325.
8. Morris, J.S., et al. 2006. Involvement of axonal guidance proteins and their signaling partners in the developing mouse mammary gland. J. Cell. Physiol. 206: 16-24.

CHROMOSOMAL LOCATION

Genetic locus: BASP1 (human) mapping to 5p15.1-p14; Basp1 (mouse) mapping to 15 B1.

SOURCE

Nap-22 (M-65) is a rabbit polyclonal antibody raised against amino acids 11-75 mapping near the N-terminus of Nap-22 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Nap-22 (M-65) is recommended for detection of Nap-22 of mouse and rat 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Nap-22 siRNA (m): sc-44611.

Molecular Weight of Nap-22: 22 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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