SANTA CRUZ BIOTECHNOLOGY, INC.

SCG10 (P-15): sc-49258

BACKGROUND

SCG10, also designated stathmin-like 2 (STMN2), is a neuronal growth-associated protein (nGAP) that belongs to the stathmin family. Stathmin family phosphoproteins are involved in regulation of microtubule dynamics and signal transduction. SCG10, which is membrane- associated and neuron-specific, may participate in neuronal differentiation and may modulate membrane interaction with the cytoskeleton during neurite outgrowth. The SCG10 protein binds to and inhibits the assembly of microtubules, and can also induce microtubule disassembly. The assembly and disassembly of microtubules is necessary for cell division, intracellular transport and cell movements, as well as neurite elongation, outgrowth and branching in the developing nervous system.

REFERENCES

1. Stein, R., et al. 1990. The NGF-inducible SCG10 mRNA encodes a novel membrane-bound protein present in growth cones and abundant in developing neurons. Neuron 1: 463-476.
2. Wuenschell, C.W., et al. 1990. Analysis of SCG10 gene expression in transgenic mice reveals that neural specificity is achieved through selective derepression. Neuron 4: 595-602.
3. Riederer, B.M., et al. 1997. Regulation of microtubule dynamics by the neuronal growth-associated protein SCG10. Proc. Natl. Acad. Sci. USA 94: 741-745.
4. Maekawa, S., et al. 2001. Localization of neuronal growth-associated, microtubule-destabilizin SCG10 in brain-derived raft membrane microdomains. J. Biochem. 129: 691-697.
5. Charbaut, E., et al. 2001. Stathmin family proteins display specific molecular and tubulin binding properties. J. Biol. Chem. 276: 16146-16154.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600621. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: STMN2 (human) mapping to 8q21.13.

SOURCE

SCG10 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal regulatory/phosphorylation domain of SCG10 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-49258 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

SCG10 (P-15) is recommended for detection of SCG10 of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SCG10 (P-15) is also recommended for detection of SCG10 in additional species, including equine and canine.

Suitable for use as control antibody for SCG10 siRNA (h): sc-40782, SCG10 shRNA Plasmid (h): sc-40782-SH and SCG10 shRNA (h) Lentiviral Particles: sc-40782-V.

Molecular Weight of SCG10: 23-25 kDa.

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) 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.

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.