

NCS-1 (L-19): sc-13166

BACKGROUND

NCS-1 (for neuronal calcium sensor-1, also designated frequenin) belongs to a highly conserved family of EF-hand-containing Ca^{2+} -binding proteins expressed mainly in neurons. NCS-1 is localized to neuronal cell bodies and axons throughout the brain and spinal cord. It is also expressed in glial cells and in neuroendocrine bovine adrenal chromaffin and PC12 cells. NCS-1 is a regulatory protein involved in Ca^{2+} -dependent exocytosis of synaptic vesicles and dense core granules. NCS-1 also functions in the voltage-independent autocrine pathway that negatively regulates non-L-type Ca^{2+} channels.

REFERENCES

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2. Cox, J.A., et al. 1994. Cation binding and conformational changes in VILIP and NCS-1, two neuron-specific calcium-binding proteins. *J. Biol. Chem.* 269: 32807-32813.
3. Olafsson, P., et al. 1997. The Ca^{2+} binding protein, frequenin is a nervous system-specific protein in mouse preferentially localized in neurites. *Brain Res. Mol. Brain Res.* 44: 73-82.
4. McFerran, B.W., et al. 1998. Neuronal Ca^{2+} sensor 1, the mammalian homologue of frequenin, is expressed in chromaffin and PC12 cells and regulates neurosecretion from dense-core granules. *J. Biol. Chem.* 273: 22768-22772.
5. Braunewell, K.H., et al. 1999. Intracellular neuronal calcium sensor proteins: a family of EF-hand calcium-binding proteins in search of a function. *Cell Tissue Res.* 295: 1-12.
6. Martone, M.E., et al. 1999. Cellular and subcellular distribution of the calcium-binding protein NCS-1 in the central nervous system of the rat. *Cell Tissue Res.* 295: 395-407.
7. Weiss, J.L., et al. 2000. NCS-1/Frequenin functions in an autocrine pathway regulating Ca^{2+} channels in bovine adrenal chromaffin cells. *J. Biol. Chem.* 275: 40082-40087.

CHROMOSOMAL LOCATION

Genetic locus: *FREQ* (human) mapping to 9q34.11; *Freq* (mouse) mapping to 2 B.

SOURCE

NCS-1 (L-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NCS-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-13166 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NCS-1 (L-19) is recommended for detection of NCS-1 of mouse, rat and 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).

NCS-1 (L-19) is also recommended for detection of NCS-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NCS-1 siRNA (h): sc-36019, NCS-1 siRNA (m): sc-36020, NCS-1 siRNA (r): sc-270206, NCS-1 shRNA Plasmid (h): sc-36019-SH, NCS-1 shRNA Plasmid (m): sc-36020-SH, NCS-1 shRNA Plasmid (r): sc-270206-SH, NCS-1 shRNA (h) Lentiviral Particles: sc-36019-V, NCS-1 shRNA (m) Lentiviral Particles: sc-36020-V and NCS-1 shRNA (r) Lentiviral Particles: sc-270206-V.

Molecular Weight of NCS-1: 21 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, U-87 MG cell lysate: sc-2411 or T98G cell lysate: sc-2294.

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.

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.


 MONOS
Satisfaction
Guaranteed

Try **NCS-1 (G-4): sc-376206** or **NCS-1 (1): sc-136000**, our highly recommended monoclonal alternatives to NCS-1 (L-19).