Technical Data Sheet Purified Mouse Anti-NCS-1

Product Information

| Material Number: | 611578 |
|------------------|---|
| Alternate Name: | Neuronal Ca2+ Sensor-1 |
| Size: | 50 µg |
| Concentration: | 250 µg/ml |
| Clone: | 1/NCS-1 |
| Immunogen: | Rat NCS-1 aa. 1-190 |
| Isotype: | Mouse IgG1 |
| Reactivity: | QC Testing: Rat |
| | Tested in Development: Human, Mouse |
| Target MW: | 21 kDa |
| Storage Buffer: | Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09\%$ sodium azide. |

Description

Ca2+-signaling pathways are critical for a variety of cell processes, such as gene expression, cytoskeletal dynamics, cell cycle, cell death, synaptic transmission, and basic cellular metabolism. A variety of EF-hand containing Ca2+-binding protein families have been implicated in neuronal Ca2+-regulated events. For instance, the neuronal Ca2+ sensor family (recoverin, neurocalcin, hippocalcin, VILIP, and neuronal Ca 2+ sensor-1 (NCS-1) have been implicated in phototransduction signaling in photoreceptor cells and in exocytosis in presynaptic terminals. NCS-1 is the mammalian homologue of the Drosophila Ca2+-binding protein, frequenin. It contains four EF-hand motifs and an N-terminal myristolation site and is expressed in neurons, chromaffin cells, and glial cells. Overexpression of NCS-1 in chromaffin and PC12 cells increases Ca 2+-regulated exocytosis of dense-core granules. In vitro, NCS-1 activates a variety of enzymes, including calcineurin, cyclic nucleotide phosphodiesterase, and nitric-oxide synthase. Thus, NCS-1 is a Ca2+-binding protein that regulates a variety of cell signaling pathways involved with neuronal exocytosis.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20° C.

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Application Notes

| Application | | | | | |
|-------------|--------------------|------------------|--|--|--|
| | Western blot | Routinely Tested | | | |
| | Immunofluorescence | Not Recommended | | | |

Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|----------------|-------------------------|--------|--------|
| 611463 | Rat Cerebrum Lysate | 500 µg | (none) |
| 554002 | HRP Goat Anti-Mouse Igs | 1.0 ml | (none) |

Product Notices

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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McFerran BW, Weiss JL, Burgoyne RD. Neuronal Ca(2+) sensor 1. Characterization of the myristoylated protein, its cellular effects in permeabilized adrenal chromaffin cells, Ca(2+)-independent membrane association, and interaction with binding proteins, suggesting a role in rapid Ca(2+) signal transduction. *J Biol Chem.* 1999; 274(42):30258-30265.(Biology)

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