SANTA CRUZ BIOTECHNOLOGY, INC.

CSP (N-17): sc-15951

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cysteine string proteins (CSPs) are synaptic vesicle-associated, secretory vesicle proteins that are involved in Ca^{2+}-regulated exocytosis of synaptic vesicles and modulation of presynaptic transmembrane calcium fluxes in neuroendocrine and endocrine cell types. CSP contains a J-domain that binds HSP 70/HSC 70 chaperone ATPases and a membrane-targeting, palmitoylated cysteine-rich string region. CSPs may act as molecular chaperones in synapses, and mediate conformational folding of components of the vesicular exocytotic machinery. CSP is involved in the fine tuning of neurotransmission through its interaction with receptor-coupled trimeric GTP binding proteins (G proteins) and N-type Ca^{2+} channels. Two variants of CSP have been described: CSP1; and the 31 amino acid, C-terminally truncated isoform, CSP2. Subcellular fractionation of Insulinoma cells shows CSP1 in granular fractions, while the membrane and cytosol fractions contain predominantly CSP2. The fractions also contain additional proteins, presumably CSP dimers. Furthermore, in various mammalian cell lines (including rat brain) CSP1 expression predominates CSP2 expression.

CHROMOSOMAL LOCATIONS

Genetic locus: RCAN1 (human) mapping to 21q22.12, RCAN2 (human) mapping to 6p12.3; Rcan1 (mouse) mapping to 16 C4, Rcan2 (mouse) mapping to 17 C.

SOURCE

CSP (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CSP 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-15951 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CSP (N-17) is recommended for detection of CSP isoforms CSP1 and CSP2 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).

CSP (N-17) is also recommended for detection of CSP isoforms CSP1 and CSP2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CSP siRNA (h): sc-43709, CSP siRNA (m): sc-41928, CSP shRNA Plasmid (h): sc-43709-SH, CSP shRNA Plasmid (m): sc-41928-SH, CSP shRNA (h) Lentiviral Particles: sc-43709-V and CSP shRNA (m) Lentiviral Particles: sc-41928-V.

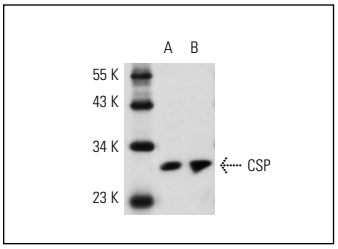
Molecular Weight of CSP: 30 kDa.

Positive Controls: rat cerebellum extract: sc-2398 or rat brain extract: sc-2392.

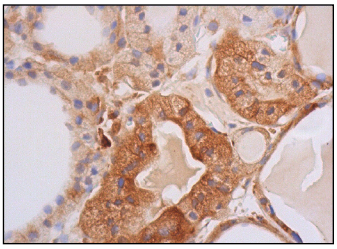
RECOMMENDED SECONDARY REAGENTS

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



CSP (N-17): sc-15951. Western blot analysis of CSP expression in rat cerebellum (**A**) and rat brain (**B**) extracts.



CSP (N-17): sc-15951. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic and membrane staining of glandular cells.

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 **CSP (H-3): sc-137128** or **CSP (16): sc-136468**, our highly recommended monoclonal alternatives to CSP (N-17).