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- Expressversand

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# CSP (m2): 293T Lysate: sc-126671

## BACKGROUND

Cysteine string proteins (CSPs) are synaptic vesicle-associated, secretory vesicle proteins that are involved in  $\text{Ca}^{2+}$ -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  $\text{Ca}^{2+}$  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.

## REFERENCES

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2. Chamberlain, L.H. and Burgoyne, R.D. 1998. Cysteine string protein functions directly in regulated exocytosis. *Mol. Biol. Cell* 9: 2259-2267.
3. Zhang, H., Kelley, W.L., Chamberlain, L.H., Burgoyne, R.D. and Lang, J. 1999. Mutational analysis of cysteine-string protein function in Insulin exocytosis. *J. Cell Sci.* 112: 1345-1351.
4. Magga, J.M., Jarvis, S.E., Arnot, M.I., Zamponi, G.W. and Braun, J.E. 2000. Cysteine string protein regulates G protein modulation of N-type calcium channels. *Neuron* 28: 195-204.
5. Chamberlain, L.H. and Burgoyne, R.D. 2000. Cysteine-string protein: the chaperone at the synapse. *J. Neurochem.* 74: 1781-1789.
6. Gleave, T.L., Beechey, R.B. and Burgoyne, R.D. 2001. Cysteine string protein expression in mammary epithelial cells. *Pflugers Arch.* 441: 639-649.
7. Zhang, W., Khan, A., Ostenson, C.G., Berggren, P.O., Efendic, S. and Meister, B. 2002. Downregulated expression of exocytotic proteins in pancreatic islets of diabetic GK rats. *Biochem Biophys Res Commun.* 291: 1038-1044.

## CHROMOSOMAL LOCATION

Genetic locus: Dnajc5 (mouse) mapping to 2 H4.

## PRODUCT

CSP (m2): 293T Lysate represents a lysate of mouse CSP transfected 293T cells and is provided as 100  $\mu\text{g}$  protein in 200  $\mu\text{l}$  SDS-PAGE buffer.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

CSP (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive CSP antibodies. Recommended use: 10-20  $\mu\text{l}$  per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## STORAGE

Store at  $-20^{\circ}\text{C}$ . Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.