



SV2A (h3): 293T Lysate: sc-178004

BACKGROUND

In all vertebrates, SV2 proteins are abundant, hydrophobic, membrane glycoproteins that are expressed as two major isoforms, SV2A and SV2B, and one minor isoform, SV2C. SV2 proteins are differentially expressed in the brain and are present on all synaptic vesicles, independent of transmitter type. SV2A is abundantly expressed in the subcortex, specifically in the synaptic vesicles of all presynaptic nerve terminals, and also in most neuroendocrine secretory granules. SV2B displays a more restricted pattern of expression in that it is only present on a small subset of synapses in the hippocampus and cortex. SV2A and SV2B are functionally redundant and are required for maintaining normal brain function in vertebrates. SV2A and SV2B mediate synaptic transmission by regulating cytoplasmic Ca^{2+} levels in the nerve terminal during repetitive stimulation.

REFERENCES

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2. Lowe, A.W., Madeddu, L. and Kelly, R.B. 1988. Endocrine secretory granules and neuronal synaptic vesicles have three integral membrane proteins in common. *J. Cell Biol.* 106: 51-59.
3. Bajjaleih, S.M., Peterson, K., Linial, M. and Scheller, R.H. 1993. Brain contains two forms of synaptic vesicle protein 2. *Proc. Natl. Acad. Sci. USA* 90: 2150-2154.
4. Janz, R. and Südhof, T.C. 1999. SV2C is a synaptic vesicle protein with an unusually restricted localization: anatomy of a synaptic vesicle protein family. *Neuroscience* 94: 1279-1290.
5. Janz, R., Goda, Y., Geppert, M., Missler, M. and Südhof, T.C. 1999. SV2A and SV2B function as redundant Ca^{2+} regulators in neurotransmitter release. *Neuron* 24: 1003-1016.

CHROMOSOMAL LOCATION

Genetic locus: SV2A (human) mapping to 1q21.2.

PRODUCT

SV2A (h3): 293T Lysate represents a lysate of human SV2A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

SV2A (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive SV2A antibodies. Recommended use: 10-20 µl 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° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.