

Store at
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#66724**SV2A (D1L8S) Rabbit mAb**

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-F	H M R	Endogenous	80-100	Rabbit IgG	#Q7L0J3	9900

Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunofluorescence (Frozen)

Dilution

1:1000
1:50
1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #28944.

Specificity/Sensitivity

SV2A (D1L8S) Rabbit mAb recognizes endogenous levels of total SV2A protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Phe516 of human SV2A protein.

Background

SV2s are a family of synaptic vesicle proteins expressed in both neurons and endocrine cells. SV2s function in the regulation of synaptic vesicle traffic, cytoplasmic Ca²⁺ levels in the nerve terminal during repetitive stimulation and the facilitation of synaptic transmission. There are three isoforms of SV2: SV2A, SV2B and SV2C. Each of these isoforms are structured similarly but expressed varyingly. SV2C, a minor isoform of SV2, expressed in a small subset of neurons located within the basal forebrain, midbrain and brainstem. SV2B, a major isoform of SV2 is expressed more abundantly, although rarely without the coexpression of SV2A. SV2A, the other major isoform of SV2 is the most widely expressed. SV2A is located in the presynaptic nerve terminals of almost every neuron throughout the nervous system. In addition, it is also located in most neuroendocrine secretory granules (1). SV2A has been identified as a critical protein for proper function of the central nervous system and has been linked to the pathophysiology of epilepsy (2). In addition to the epileptic affects of this protein, mutations in it have also been seen to result in schizophrenia (3).

Background References

1. Janz, R. et al. (1999) *Neuron* 24, 1003-16.
2. van Vliet, E.A. et al. (2009) *Epilepsia* 50, 422-33.
3. Mattheisen, M. et al. (2012) *Schizophr Res* 141, 262-5.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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