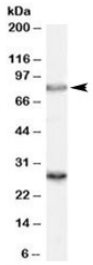
SV2A Antibody Goat Polyclonal / Synaptic vesicle glycoprotein 2A (R36311)

Catalog No.	Formulation	Size
R36311-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Predicted Reactivity	Cow, Dog, Pig
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	9900
Applications	Western Blot : 0.3-1ug/ml ELISA (peptide) LOD : 1:64000
Limitations	This SV2A antibody is available for research use only.



Western blot analysis of SV2A antibody in rat brain lysate. A band is detected at approximately 80-90 kDa, consistent with the predicted molecular weight of Synaptic vesicle glycoprotein 2A in rat, along with a lower molecular weight band. Both immunoreactive bands are blocked by pre-incubation with the immunizing peptide, supporting specificity of the goat polyclonal antibody.

Description

SV2A antibody recognizes Synaptic vesicle glycoprotein 2A, a transmembrane vesicular protein encoded by the SV2A gene that localizes predominantly to synaptic vesicles within presynaptic terminals. SV2A is broadly expressed throughout the central nervous system in both excitatory and inhibitory neurons, where it contributes to regulated neurotransmitter release and synaptic vesicle cycling. SV2A Antibody Goat Polyclonal is developed to detect endogenous

Synaptic vesicle glycoprotein 2A in research applications focused on synaptic transmission and neuronal integrity.

Synaptic vesicle glycoprotein 2A is a member of the SV2 protein family, which includes SV2A, SV2B, and SV2C. The protein contains multiple transmembrane domains and resides within the membrane of synaptic vesicles, where it is thought to regulate vesicle priming, exocytosis efficiency, and calcium-dependent neurotransmitter release. Although the precise molecular mechanism remains under investigation, SV2A is recognized as an essential modulator of synaptic function and vesicle trafficking.

The SV2A gene is located on chromosome 1q21.3 and is highly enriched in synapse-dense regions of the brain, including cortex, hippocampus, and cerebellum. In addition to neuronal tissues, SV2A is expressed at lower levels in certain endocrine and neuroendocrine cells, consistent with its role in regulated secretory pathways. Alterations in SV2A expression or function have been associated with epilepsy and other neurologic disorders, and Synaptic vesicle glycoprotein 2A serves as the molecular binding target of the antiepileptic drug levetiracetam, underscoring its translational relevance.

Because SV2A is consistently present in presynaptic terminals, it is widely used as a marker of synaptic density and neuronal connectivity in studies of neurodevelopment, neurodegeneration, and brain injury. Changes in SV2A levels may reflect synaptic remodeling or loss in disease models and experimental systems.

By targeting SV2A, this goat polyclonal antibody supports studies of synaptic vesicle biology, neurotransmitter release mechanisms, and neuronal network organization across diverse research settings.

Application Notes

Optimal dilution of the SV2A antibody should be determined by the researcher.

Immunogen

Amino acids TVELYPSDKRTTA were used as the immunogen for this SV2A antibody.

Storage

Aliquot and store the SV2A antibody at -20oC.

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