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[Marker Primary Antibody]

Rabbit Anti-Synapsin 1/AF647 Conjugated antibody

Catalog Number: SL3501R-AF647

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-Synapsin 1/AF647
Immunogen:	KLH conjugated synthetic peptide derived from human Synapsin I
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Rat(predicted:Mouse,Pig,Rabbit)
Background:	background: This gene is a member of the synapsin gene family. Synapsins encode neuronal phosphoproteins which associate with the cytoplasmic surface of synaptic vesicles. Family members are characterized by common protein domains, and they are implicated in synaptogenesis and the modulation of neurotransmitter release, suggesting a potential role in several neuropsychiatric diseases. This member of the synapsin family plays a role in regulation of axonogenesis and synaptogenesis. The protein encoded serves as a substrate for several different protein kinases and phosphorylation may function in the regulation of this protein in the nerve terminal. Mutations in this gene may be associated with X-linked disorders with primary neuronal degeneration such as Rett syndrome. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008] **Function:** Neuronal phosphoprotein that coats synaptic vesicles, binds to the

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	cytoskeleton, and is believed to function in the regulation of neurotransmitter release. The complex formed with NOS1 and CAPON proteins is necessary for specific nitric-oxid functions at a presynaptic level. **Subunit:** Homodimer. Interacts with CAPON. Forms a ternary complex with NOS1. Isoform Ib interacts with PRNP. **Subcellular Location:** Cell junction, synapse. Golgi apparatus. **Post-translational modifications:** Substrate of at least four different protein kinases. It is probable that phosphorylation plays a role in the regulation of synapsin-1 in the nerve terminal. Phosphorylated upon DNA damage, probably by ATM or ATR. Phosphorylation at Ser-9 dissociates synapsins from synaptic vesicles. DISEASE: Defects in SYN1 are a cause of epilepsy X-linked with variable learning disabilities and behavior disorders [MIM:300491]. XELBD is characterized by variable combinations of epilepsy, learning difficulties, macrocephaly, and aggressive behavior. **Similarity:** Belongs to the synapsin family. **Database links:** **Entrez Gene:** 6853 Human **Entrez Gene:** 20964 Mouse **Entrez Gene:** 24949 Rat Omim: 313440 Human **SwissProt:** P17600 Human **SwissProt:** O88935 Mouse **SwissProt:** P09951 Rat **Unigene:** 225936 Human **Unigene:** 439844 Mouse **Unigene:** 9923 Rat Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.