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Mouse Monoclonal Antibody to SYN1

Purified Mouse Monoclonal Antibody
Catalog # AO2349a

Product Information

Application	WB, ICC, E
Primary Accession	P17600
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Clone Names	7B1D9
Isotype	Mouse IgG1
Calculated MW	74111
Description	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.;
Immunogen	Purified recombinant fragment of human SYN1 (AA: 362-511) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide
Application Note	ELISA: 1/10000; WB: 1/500 - 1/2000; ICC: 1/200 - 1/1000;

Additional Information

Gene ID	6853
Other Names	SYNI; SYN1a; SYN1b
Dilution	WB~~1:1000 ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Monoclonal Antibody to SYN1 is for research use only and not for use in diagnostic or therapeutic procedures.

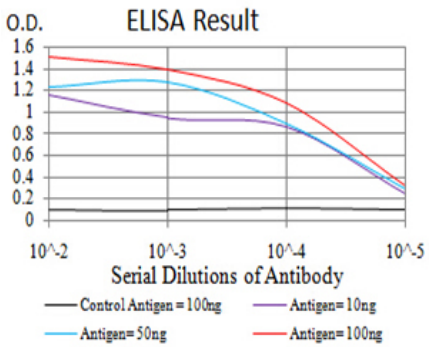
Protein Information

Name	SYN1
Function	Neuronal phosphoprotein that coats synaptic vesicles, and binds to the cytoskeleton. Acts as a regulator of synaptic vesicles trafficking, involved in the control of neurotransmitter release at the pre-synaptic terminal (PubMed:21441247, PubMed:23406870). Also involved in the regulation of axon outgrowth and synaptogenesis (By similarity). The complex formed with NOS1 and CAPON proteins is necessary for specific nitric-oxid functions at a presynaptic level (By similarity).
Cellular Location	Synapse {ECO:0000250|UniProtKB:O88935}. Golgi apparatus {ECO:0000250|UniProtKB:O88935}. Presynapse. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle {ECO:0000250|UniProtKB:P09951}. Note=Dissociates from synaptic vesicles and redistributes into the axon during action potential firing, in a step that precedes fusion of vesicles with the plasma membrane. Reclusters to presynapses after the cessation of synaptic activity. {ECO:0000250|UniProtKB:P09951}

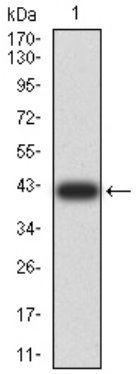
References

1.Synapse. 2012 Nov;66(11):979-83. ; 2.J Neurosci Res. 2009 Aug 1;87(10):2255-63.;

Images

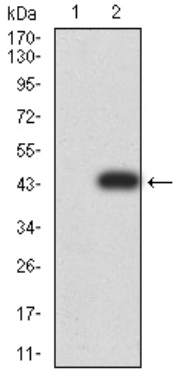


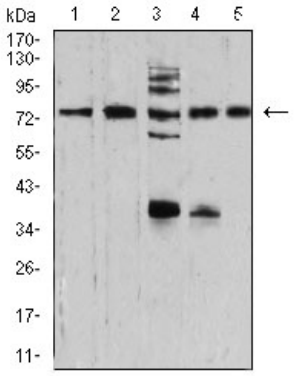
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



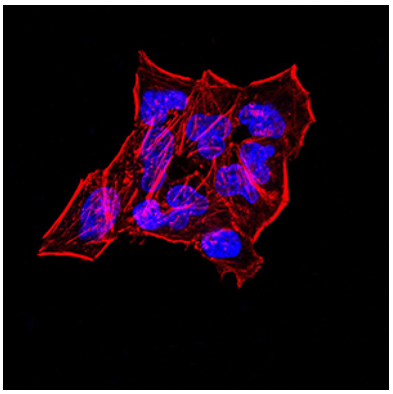
Western blot analysis using SYN1 mAb against human SYN1 (AA: 362-511) recombinant protein. (Expected MW is 41.7 kDa)

Western blot analysis using SYN1 mAb against HEK293 (1) and SYN1 (AA: 362-511)-hIgGFc transfected HEK293 (2) cell lysate.

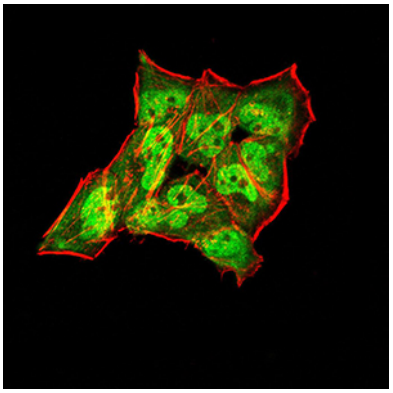




Western blot analysis using SYN1 mouse mAb against NIH/3T3 (1), U251 (2), C6 (3), A549 (4), and MCF-7 (5) cell lysate.

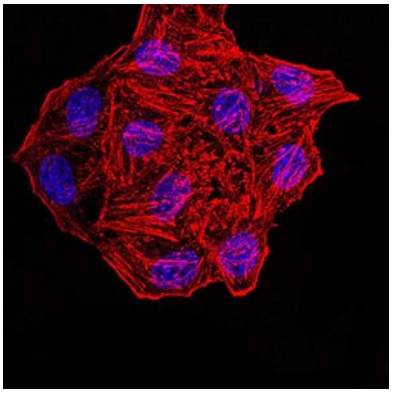


Immunofluorescence analysis of Hela cells. Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher



Immunofluorescence analysis of Hela cells using SYN1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin. Secondary antibody from Fisher

Immunofluorescence analysis of HepG2 cells. Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher



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