

## Anti-Synapsin II/SYN2 Antibody Picoband®

Catalog Number: PB10100

### About SYN2

Synapsin II is the collective name for synapsin IIa and synapsin IIb, two nearly identical phosphoproteins in the synapsin family that in humans are encoded by the SYN2 gene. 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 encodes a neuron-specific phosphoprotein that selectively binds to small synaptic vesicles in the presynaptic nerve terminal. Polymorphisms in this gene are associated with abnormal presynaptic function and related neuronal disorders, including autism, epilepsy, bipolar disorder and schizophrenia. Alternative splicing of this gene results in multiple transcript variants. The tissue inhibitor of metalloproteinase 4 gene is located within an intron of this gene and is transcribed in the opposite direction.

### Overview

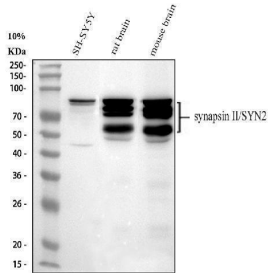
Product Name	Anti-Synapsin II/SYN2 Antibody Picoband®
Reactive Species	Human, Mouse, Pig, Rat
Description	Boster Bio Anti-Synapsin II/SYN2 Antibody Picoband® catalog # PB10100. Tested in ICC/IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat, Pig. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q92777

### Technical Details

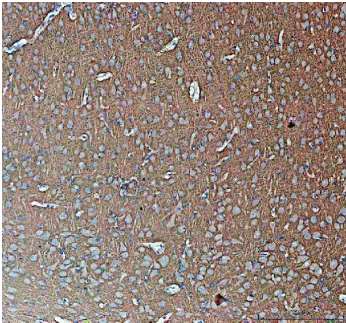
Immunogen	E. coli-derived human Synapsin II recombinant protein (Position: A497-D582). Human Synapsin II shares 93.1% and 89.7% amino acid (aa) sequence identity with mouse and rat Synapsin II, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.

Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Pig, Rat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human

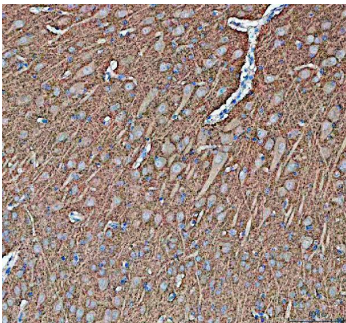
## Anti-Synapsin II/SYN2 Antibody Picoband® (PB10100) Images



Western blot analysis of Synapsin II using anti-Synapsin II antibody (PB10100). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: rat brain tissue lysates, Lane 3: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Synapsin II antigen affinity purified polyclonal antibody (Catalog # PB10100) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for Synapsin II at approximately 55, 80 kDa. The expected band size for Synapsin II is at 63 kDa.

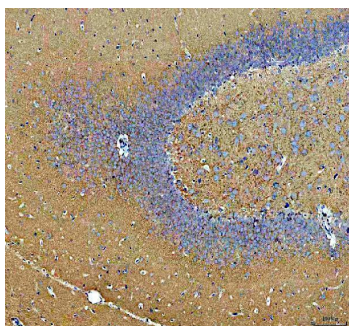


IHC analysis of Synapsin II using anti-Synapsin II antibody (PB10100). Synapsin II was detected in a paraffin-embedded section of pig brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Synapsin II Antibody (PB10100) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

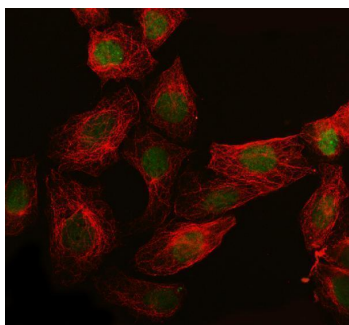


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IHC analysis of Synapsin II using anti-Synapsin II antibody (PB10100). Synapsin II was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat



serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Synapsin II Antibody (PB10100) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IF analysis of Synapsin II using anti-Synapsin II antibody (PB10100) and anti-Tubulin Alpha antibody (M03989-3). Synapsin II was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Synapsin II Antibody (PB10100) and mouse anti-Tubulin Alpha antibody (M03989-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) and Cy3 Conjugated Goat Anti-Mouse IgG (BA1031) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

## 1 Publications Citing This Product

1. PubMed ID: 33607158, Fei Y,Zhao B,Zhu J,Fang W,Li Y.XQ-1H promotes cerebral angiogenesis via activating PI3K/Akt/GSK3beta/beta-catenin/VEGF signal in mice exposed to cerebral ischemic injury.Life Sci.2021 Feb 16:119234.doi:10.1016/j.lfs.2021.119234.Epub ahead of print.PMID:33607158

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