

Anti-SYP/Synaptophysin Antibody Picoband® (monoclonal, 3G12)

Catalog Number: M05049-3

About SYP

SYP (Synaptophysin) is located on the short arm of X chromosome (Xp11.23-p11.22). The protein is a synaptic vesicle glycoprotein with four transmembrane domains weighing 38kDa. It is present in neuroendocrine cells and in virtually all neurons in the brain and spinal cord that participate in synaptic transmission. It acts as a marker for neuroendocrine tumors, and its ubiquity at the synapse has led to the use of synaptophysin immunostaining for quantification of synapses. Also, the protein binds cholesterol and is thought to direct targeting of vesicle-associated membrane protein 2 (synaptobrevin) to intracellular compartments. Mutations in this gene are associated with X-linked mental retardation (XLMR).

Overview

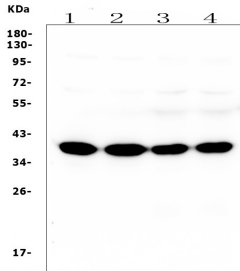
Product Name	Anti-SYP/Synaptophysin Antibody Picoband® (monoclonal, 3G12)
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-SYP/Synaptophysin Antibody Picoband® (monoclonal, 3G12) catalog # M05049-3. Tested in WB applications. This antibody reacts with Mouse, Rat. The brand Picoband indicates this 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	WB
Clonality	Monoclonal 3G12
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Na ₃ .
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	Mouse
Uniprot ID	Human(P08247), Mouse(Q62277), Rat(P07825)

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Synaptophysin, identical to the related mouse and rat sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b

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, Mouse, Rat

Anti-SYP/Synaptophysin Antibody Picoband® (monoclonal, 3G12) (M05049-3) Images



Western blot analysis of SYP using anti-SYP antibody (M05049-3). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: rat brain whole cell lysates, Lane 3: mouse brain whole cell lysates, Lane 4: mouse brain whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-SYP antigen affinity purified polyclonal antibody (Catalog # M05049-3) at 0.5 g/mL overnight at 4C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for SYP at approximately 38KD. The expected band size for SYP is at 34KD.

2 Publications Citing This Product

1. PubMed ID: 10.1002/syn.20684, Abnormality of synaptic vesicular associated proteins in cerebral cortex and hippocampus after microwave exposure
2. PubMed ID: 33531914, Lin J,Hao C,Gong Y,Zhang Y,Li Y,Feng Z,Xu X,Huang H,Liao W. Effect of Tetramethylpyrazine on Neuroplasticity after Transient Focal Cerebral Ischemia Reperfusion in Rats. Evid Based Complement Alternat Med. 2021 Jan 18;2021:1587241.doi:10.1155/2021/1587241

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