

Anti-Synaptophysin Antibody [SJ26-85] - BSA and Azide free

HA751835



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	WB, IHC-P, IHC-Fr, IF-Tissue
Molecular Wt:	Predicted band size: 34 kDa
Clone number:	SJ26-85

Description: Synaptic vesicles participate in a cycle of fusion with the plasma membrane and reformation by endocytosis. Synaptic vesicle protein synaptophysin (SYP) is targeted to early endosomes in transfected fibroblasts and in neuroendocrine cells. SYP is an N-glycosylated intergral membrane protein found in neurons and endocrine cells that associates into hexamers to form a large conductance channel. SYP contains four transmembrane domains and may function as a gap junction-like channel. Membrane cholesterol specifically interacts with SYP to play a role in vesicle formation. Synaptobrevin (VAMP) also binds to SYP and the resultant complex is upregulated during neuronal development, but is absent in exocytosis fusion complex. Thus, the synaptophysin-synaptobrevin complex is not essential for exocytosis, but rather provides a pool of synaptobrevin for exocytosis. In addition, the tail domain of brain Myosin V also forms a stable complex with synaptobrevin II and SYP, and this complex is disassembled upon the depolarization-induced entry of Ca²⁺ into intact nerve endings.

Immunogen: Synthetic peptide within Human Synaptophysin aa 224 – 313 (Cytoplasmic).

Positive control: SH-SY5Y cell lysate, PC-12 cell lysate, human brain tissue lysate, mouse brain tissue lysate, rat brain tissue lysate, atypical carcinoid tissue, human medullary thyroid carcinoma tissue, human pancreas tissue, human small intestine tissue, mouse cerebellum tissue, mouse pancreas tissue, rat cerebellum tissue.

Subcellular location: Cytoplasmic, Cell junction, synapse, synaptosome.

Database links: SwissProt: P08247 Human | Q62277 Mouse | P07825 Rat

Recommended Dilutions:

WB	1:5,000-1:10,000
IHC-P	1:2,000
IHC-Fr	1:1,000
IF-Tissue	1:500

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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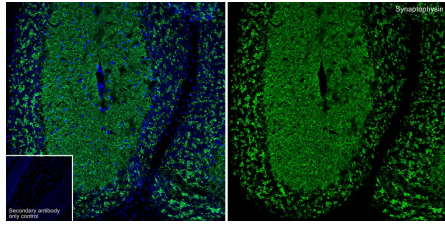
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Images

**Fig1:** Application: IHC-Fr

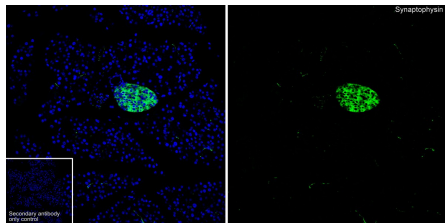
Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1/1,000

Antigen retrieval: Not required

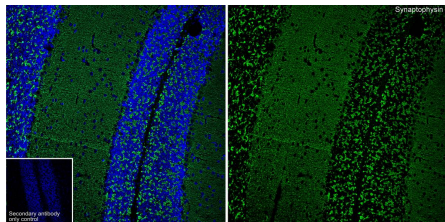
**Fig2:** Application: IF-tissue

Species: Mouse

Site: Pancreas

Sample: Paraffin-embedded section

Antibody concentration: 1/500

**Fig3:** Application: IF-tissue

Species: Mouse

Site: Cerebellum

Sample: Paraffin-embedded section

Antibody concentration: 1/500

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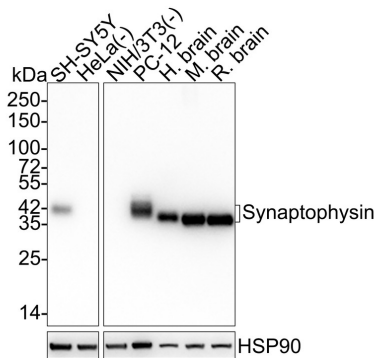
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Fig4: Western blot analysis of Synaptophysin on different lysates with Rabbit anti-Synaptophysin antibody (HA751835) at 1/5,000 dilution.



Lane 1: SH-SY5Y cell lysate
 Lane 2: HeLa cell lysate (negative)
 Lane 3: NIH/3T3 cell lysate (negative)
 Lane 4: PC-12 cell lysate
 Lane 5: Human brain tissue lysate
 Lane 6: Mouse brain tissue lysate
 Lane 7: Rat brain tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 34 kDa
 Observed band size: 34/40 kDa

Exposure time: 43 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (HA751835) at 1/5,000 dilution was used in 5% NFDN/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:50,000 dilution was used for 1 hour at room temperature.

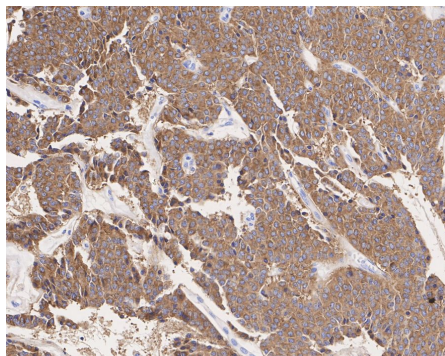


Fig5: Immunohistochemical analysis of paraffin-embedded atypical carcinoid tissue with Rabbit anti-Synaptophysin antibody (HA751835) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA751835) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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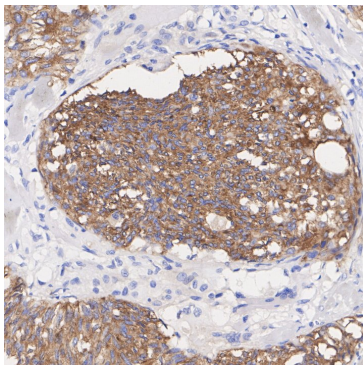


Fig6: Immunohistochemical analysis of paraffin-embedded human medullary thyroid carcinoma tissue with Rabbit anti-Synaptophysin antibody (HA751835) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA751835) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

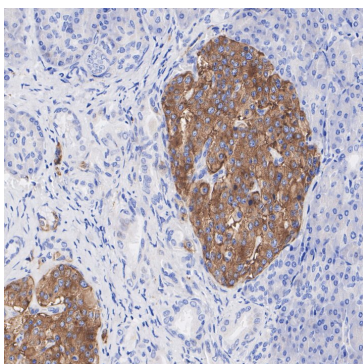


Fig7: Immunohistochemical analysis of paraffin-embedded human pancreas tissue with Rabbit anti-Synaptophysin antibody (HA751835) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA751835) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

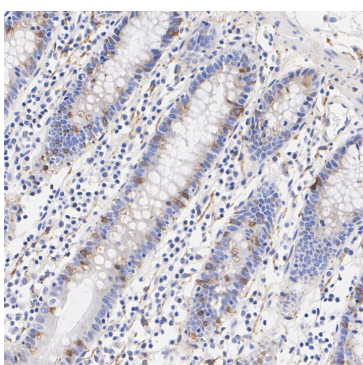


Fig8: Immunohistochemical analysis of paraffin-embedded human colon tissue with Rabbit anti-Synaptophysin antibody (HA751835) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA751835) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

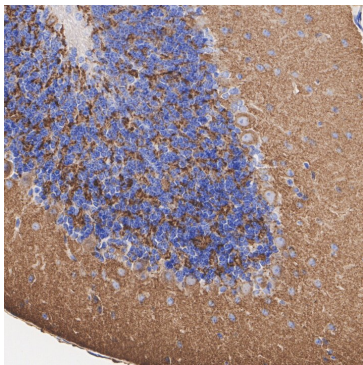


Fig9: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rabbit anti-Synaptophysin antibody (HA751835) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA751835) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

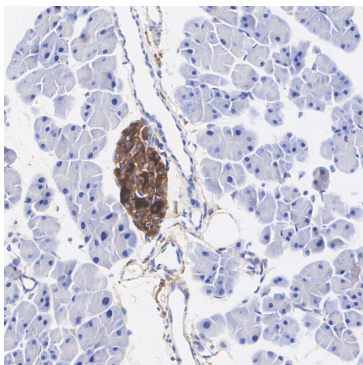


Fig10: Immunohistochemical analysis of paraffin-embedded mouse pancreas tissue with Rabbit anti-Synaptophysin antibody (HA751835) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA751835) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

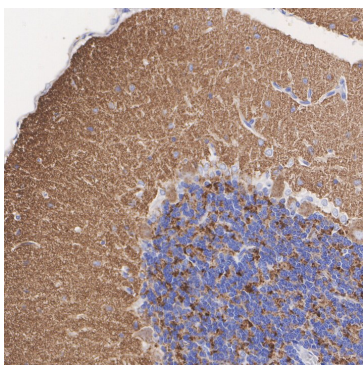


Fig11: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rabbit anti-Synaptophysin antibody (HA751835) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA751835) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”.

Background References

1. Atzpodien EA et al. Advanced Clinical Imaging and Tissue-based Biomarkers of the Eye for Toxicology Studies in Minipigs. *Toxicol Pathol* 44:398-413 (2016).
2. Ren M et al. A biofidelic 3D culture model to study the development of brain cellular systems. *Sci Rep* 6:24953 (2016).

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