

Cat.No. 113 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 5000 up to 1 : 10000 (AP staining) IP: not tested yet ICC: 1 : 500 up to 1 : 1000 IHC: 1 : 500 IHC-P/FFPE: 1 : 2000
Clone	57.4
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic peptide corresponding to AA 156 to 173 from rat Clathrin light chainB (UniProt Id: P08082)
Epitop	Epitop: AA 156 to 173 from rat Clathrin light chainB (UniProt Id: P08082)
Reactivity	Reacts with: human (P09497), rat (P08082), mouse (Q6IRU5), zebrafish. Other species not tested yet.
Specificity	Specific for both neuronal light chains, does not cross-react with the non-neuronal variants.
Remarks	Suitable for immunogold electron microscopy.

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Clathrin consists of heavy chains and light chains that co-assemble to triskelions. The light chains are differentially spliced, with neurons expressing a special variant that is not detectable elsewhere. The neuron-specific light chains are enriched in synaptic nerve terminals where they participate in synaptic vesicle endocytosis.

Selected References SYSY Antibodies

A selective activity-dependent requirement for dynamin 1 in synaptic vesicle endocytosis.
Ferguson SM, Brasnjo G, Hayashi M, Wölfel M, Collesi C, Giovedi S, Raimondi A, Gong LW, Ariel P, Paradise S, O'toole E, et al. Science (New York, N.Y.) (2007) 316(5824): 570-4. **WB, ICC**

Distribution of synaptic vesicle proteins in the mammalian retina identifies obligatory and facultative components of ribbon synapses.
Von Kriegstein K, Schmitz F, Link E, Südhof TC
The European journal of neuroscience (1999) 11(4): 1335-48. **WB, IHC**

Glyoxal as an alternative fixative to formaldehyde in immunostaining and super-resolution microscopy.
Richter KN, Revelo NH, Seitz KJ, Helm MS, Sarkar D, Saleeb RS, D'Este E, Eberle J, Wagner E, Vogl C, Lazaro DF, et al. The EMBO journal (2018) 37(1): 139-159. **ICC; tested species: mouse**

JIP3 localises to exocytic vesicles and focal adhesions in the growth cones of differentiated PC12 cells.
Caswell PT, Dickens M
Molecular and cellular biochemistry (2017) : . **ICC; tested species: rat**

Vesicular Synaptobrevin/VAMP2 Levels Guarded by AP180 Control Efficient Neurotransmission.
Koo SJ, Kochlamazashvili G, Rost B, Puchkov D, Gimber N, Lehmann M, Tadeus G, Schmoranzler J, Rosenmund C, Haucke V, Maritzen T, et al.
Neuron (2015) 88(2): 330-44. **WB; tested species: mouse**

Proteomic screening of glutamatergic mouse brain synaptosomes isolated by fluorescence activated sorting.
Biesemann C, Grønborg M, Luquet E, Wichert SP, Bernard V, Bungers SR, Cooper B, Varoqueaux F, Li L, Byrne JA, Urlaub H, et al. The EMBO journal (2014) 33(2): 157-70. **WB; tested species: mouse**

Evidence for a Clathrin-independent mode of endocytosis at a continuously active sensory synapse.
Fuchs M, Brandstätter JH, Regus-Leidig H
Frontiers in cellular neuroscience (2014) 8: 60. **IHC; tested species: rat**

Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins.
Wilhelm BG, Mandad S, Truckenbrodt S, Kröhnert K, Schäfer C, Rammner B, Koo SJ, Claßen GA, Krauss M, Haucke V, Urlaub H, et al.
Science (New York, N.Y.) (2014) 344(6187): 1023-8. **ICC; tested species: rat**

Modes and regulation of endocytic membrane retrieval in mouse auditory hair cells.
Neef J, Jung S, Wong AB, Reuter K, Pangrsic T, Chakrabarti R, Kügler S, Lenz C, Nouvian R, Boumil RM, Frankel WN, et al. The Journal of neuroscience : the official journal of the Society for Neuroscience (2014) 34(3): 705-16. **IHC; tested species: mouse**

Small-scale isolation of synaptic vesicles from mammalian brain.
Ahmed S, Holt M, Riedel D, Jahn R
Nature protocols (2013) 8(5): 998-1009. **WB; tested species: mouse**

CSPa knockout causes neurodegeneration by impairing SNAP-25 function.
Sharma M, Burré J, Bronk P, Zhang Y, Xu W, Südhof TC
The EMBO journal (2012) 31(4): 829-41. **WB; tested species: mouse**

Role for Reelin in neurotransmitter release.
Hellwig S, Hack I, Kowalski J, Brunne B, Jarowij J, Unger A, Bock HH, Junghans D, Frotscher M
The Journal of neuroscience : the official journal of the Society for Neuroscience (2011) 31(7): 2352-60. **WB**

APP/PS1KI bigenic mice develop early synaptic deficits and hippocampus atrophy.
Breyhan H, Wirths O, Duan K, Marcello A, Rettig J, Bayer TA
Acta neuropathologica (2009) 117(6): 677-85. **WB; tested species: mouse**

Stimulation of phosphatidylinositol kinase type I-mediated phosphatidylinositol (4,5)-bisphosphate synthesis by AP-2mu-cargo complexes.
Krauss M, Kukhtina V, Pechstein A, Haucke V
Proceedings of the National Academy of Sciences of the United States of America (2006) 103(32): 11934-9. **WB**

Synaptic pathology, altered gene expression, and degeneration in photoreceptors impacted by drusen.
Johnson PT, Brown MN, Pulliam BC, Anderson DH, Johnson LV
Investigative ophthalmology & visual science (2005) 46(12): 4788-95. **IHC**

The expression pattern and assembly profile of synaptic membrane proteins in ribbon synapses of the developing mouse retina.
von Kriegstein K, Schmitz F
Cell and tissue research (2003) 311(2): 159-73. **IHC**

The neuronal form of adaptor protein-3 is required for synaptic vesicle formation from endosomes.
Blumstein J, Faundez V, Nakatsu F, Saito T, Ohno H, Kelly RB
The Journal of neuroscience : the official journal of the Society for Neuroscience (2001) 21(20): 8034-42. **WB**