Synaptic Systems

Rudolf-Wissell-Str. 28
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

Neuroligin 3

Cat.No. 129 311; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. For reconstitution add 100 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	**WB**: 1 : 1000 (AP staining) **IP**: yes **ICC**: not tested yet **IHC**: not tested yet **IHC-P/FFPE**: not tested yet
Clone	335B8
Subtype	IgG2b (κ light chain)
Immunogen	Recombinant protein corresponding to AA 608 to 722 from mouse Neuroligin3 (UniProt Id: Q8BYM5)
Epitop	Epitop: AA 710 to 824 from mouse Neuroligin3 (UniProt Id: Q8BYM5)
Reactivity	Reacts with: rat (Q62889), mouse (Q8BYM5). No signal: zebrafish. Other species not tested yet.
Specificity	Specific for neuroligin 3, no cross reactivity to neuroligins 1, 2, 4. (K.O. verified)
Remarks	For optimal results an LP1 fraction is recommended.

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

Neuroligins form a family of postsynaptic cell surface molecules that interact with β-neurexins. They are 110-120 kDa polypeptides with homology to acetylcholine esterase. Neuroligin 1 and **neuroligin 3** are specifically localized to post-synaptic densities of excitatory synapses whereas neuroligin 2 is found exclusively on inhibitory synapses.
Mutations in neuroligin 3 and neuroligin 4 have been implicated with a rare, heritable form of autism.

Selected References SYSY Antibodies

Behavioral training rescues motor deficits in Cyfip1 haploinsufficiency mouse model of autism spectrum disorders.
Bachmann SO, Sledziowska M, Cross E, Kalbassi S, Waldron S, Chen F, Ranson A, Baudouin SJ
Translational psychiatry (2019) 9(1): 29. **WB, IP; tested species: mouse**

Selected General References

Neuroligin 1 is a postsynaptic cell-adhesion molecule of excitatory synapses.
Song JY, Ichtchenko K, Südhof TC, Brose N
Proceedings of the National Academy of Sciences of the United States of America (1999) 96(3): 1100-5.

Activity-dependent validation of excitatory versus inhibitory synapses by neuroligin-1 versus neuroligin-2.
Chubykin AA, Atasoy D, Etherton MR, Brose N, Kavalali ET, Gibson JR, Südhof TC
Neuron (2007) 54(6): 919-31.

Dissection of synapse induction by neuroligins: effect of a neuroligin mutation associated with autism.
Chubykin AA, Liu X, Comoletti D, Tsigelny I, Taylor P, Südhof TC
The Journal of biological chemistry (2005) 280(23): 22365-74.

Neuroligin 2 is exclusively localized to inhibitory synapses.
Varoqueaux F, Jamain S, Brose N
European journal of cell biology (2004) 83(9): 449-56.

Synaptic targeting of neuroligin is independent of neurexin and SAP90/PSD95 binding.
Dresbach T, Neeb A, Meyer G, Gundelfinger ED, Brose N
Molecular and cellular neurosciences (2004) 27(3): 227-35.

The making of neurexins.
Missler M, Fernandez-Chacon R, Südhof TC
Journal of neurochemistry (1998) 71(4): 1339-47.

Structures, alternative splicing, and neurexin binding of multiple neuroligins.
Ichtchenko K, Nguyen T, Südhof TC
The Journal of biological chemistry (1996) 271(5): 2676-82.

Neuroligin 1: a splice site-specific ligand for beta-neurexins.
Ichtchenko K, Hata Y, Nguyen T, Ullrich B, Missler M, Moomaw C, Südhof TC
Cell (1995) 81(3): 435-43.

The synaptic vesicle cycle: a cascade of protein-protein interactions.
Südhof TC
Nature (1995) 375(6533): 645-53.