

## Neurologin 2

Cat.No. 129-2P; , 100 µg peptide (lyophilized)

### Data Sheet

Reconstitution/ Storage	100 µg peptide, lyophilized. For reconstitution add 100 µl H <sub>2</sub> O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 732 to 767 from rat Neurologin2 (UniProt Id: Q62888)
Recommended dilution	Optimal concentrations should be determined by the end-user.
Remarks	This control peptide consists of the synthetic peptides (aa 732-749 and aa 750-767 of rat neurologin 2) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of peptide needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

### 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  $\beta$ -neurexins. They are 110-120 kDa polypeptides with homology to acetylcholine esterase. Neurologin 1 and neurologin 3 are specifically localized to post-synaptic densities of excitatory synapses whereas **neurologin 2** is found exclusively on inhibitory synapses. Mutations in neurologin 3 and neurologin 4 have been implicated with a rare, heritable form of autism.

### Selected General References

Neurologin 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 neurologin-1 versus neurologin-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 neurologin 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.

Neurologin 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 neurologin 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.

Neurologin 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.