

 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

Bassoon

Cat.No. 141 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 μg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 μl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 100 up to 1 : 1000 (AP staining) (see remarks) IP: not tested yet ICC: 1 : 200 up to 1 : 2000 IHC: 1 : 200 IHC-P/FFPE: 1 : 500 ELISA: yes (see remarks)
Immunogen	Recombinant protein corresponding to AA 3608 to 3938 from rat Bassoon (UniProt Id: O88778)
Reactivity	Reacts with: rat (O88778), mouse (O88737). No signal: chicken. Other species not tested yet.
Specificity	Specific for bassoon.
matching control	141-0P
Remarks	WB : Due to its large size, bassoon requires special gel-electrophoresis and Western blot protocols for visualization by immunoblotting.Excellent results can be obtained with the 4-12% TRIS-glycine gradient gels of anamed.
	ELISA : Suitable as detector antibody for sandwich-ELISA with cat. no. 141 021 as capture antibody (protocol for sandwich-ELISA).

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

Bassoon is a large protein which consists of an N-terminal Zn²⁺ finger and several piccolo-bassoon homology domains (PBH-domains). It is generally found together with piccolo, a related huge multi-domain protein of the CAZ (cytoskeletal matrix assembled at active zones).

Bassoon was suggested to be a scaffolding element of the presynapse but deletion experiments in mice have shown that bassoon is also involved in synaptic vesicle cycling. Probably bassoon interacts with other protein factors via its Zn²⁺ domain but the potential partners have not been determined yet.

Selected References SYSY Antibodies

Multicolour Multilevel STED nanoscopy of Actin/Spectrin Organization at Synapses. Sidenstein SC, D'Este E, Böhm MJ, Danzl JG, Belov VN, Hell SW Scientific reports (2016) 6: 26725. **ICC**

How to Make an Active Zone: Unexpected Universal Functional Redundancy between RIMs and RIM-BPs. Acuna C, Liu X, Südhof TC Neuron (2016) 91(4): 792-807. **WB**

Expression of Ttyh1, a member of the Tweety family in neurons in vitro and in vivo and its potential role in brain pathology. Stefaniuk M, Swiech L, Dzwonek J, Lukasiuk K Journal of neurochemistry (2010) 115(5): 1183-94. **IHC; tested species: rat**

Superresolution fluorescence microscopy for 3D reconstruction of thick samples. Park S, Kang W, Kwon YD, Shim J, Kim S, Kaang BK, Hohng S Molecular brain (2018) 11(1): 17. **IHC; tested species: mouse**

Synaptic nanomodules underlie the organization and plasticity of spine synapses. Hruska M, Henderson N, Le Marchand SJ, Jafri H, Dalva MB Nature neuroscience (2018) 21(5): 671-682. **ICC; tested species: rat**

Postsynaptic RIM1 modulates synaptic function by facilitating membrane delivery of recycling NMDARs in hippocampal neurons.

Wang J, Lv X, Wu Y, Xu T, Jiao M, Yang R, Li X, Chen M, Yan Y, Chen C, Dong W, et al. Nature communications (2018) 9(1): 2267. WB; tested species: mouse

A machine learning approach for online automated optimization of super-resolution optical microscopy. Durand A, Wiesner T, Gardner MA, Robitaille LÉ, Bilodeau A, Gagné C, De Koninck P, Lavoie-Cardinal F Nature communications (2018) 9(1): 5247. ICC; tested species: rat

OCD-like behavior is caused by dysfunction of thalamo-amygdala circuits and upregulated TrkB/ERK-MAPK signaling as a result of SPRED2 deficiency.

Ullrich M, Weber M, Post AM, Popp S, Grein J, Zechner M, Guerrero González H, Kreis A, Schmitt AG, Üçeyler N, Lesch KP, et al. Molecular psychiatry (2017) : . **WB**

Tissue multicolor STED nanoscopy of presynaptic proteins in the calyx of Held. Kempf C, Staudt T, Bingen P, Horstmann H, Engelhardt J, Hell SW, Kuner T PloS one (2013) 8(4): e62893. **IHC; tested species: rat**

βCaMKII plays a nonenzymatic role in hippocampal synaptic plasticity and learning by targeting αCaMKII to synapses. Borgesius NZ, van Woerden GM, Buitendijk GH, Keijzer N, Jaarsma D, Hoogenraad CC, Elgersma Y The Journal of neuroscience : the official journal of the Society for Neuroscience (2011) 31(28): 10141-8. **ICC; tested species: mouse**

Superresolution imaging of chemical synapses in the brain. Dani A, Huang B, Bergan J, Dulac C, Zhuang X Neuron (2010) 68(5): 843-56. **IHC; tested species: mouse**

Calcium binding to PICK1 is essential for the intracellular retention of AMPA receptors underlying long-term depression. Citri A, Bhattacharyya S, Ma C, Morishita W, Fang S, Rizo J, Malenka RC

The Journal of neuroscience : the official journal of the Society for Neuroscience (2010) 30(49): 16437-52. ICC; tested species: rat

Selected General References

Functional regions of the presynaptic cytomatrix protein bassoon: significance for synaptic targeting and cytomatrix anchoring. Dresbach T, Hempelmann A, Spilker C, tom Dieck S, Altrock WD, Zuschratter W, Garner CC, Gundelfinger ED Molecular and cellular neurosciences (2003) 23(2): 279-91.

Unitary assembly of presynaptic active zones from Piccolo-Bassoon transport vesicles. Shapira M, Zhai RG, Dresbach T, Bresler T, Torres VI, Gundelfinger ED, Ziv NE, Garner CC Neuron (2003) 38(2): 237-52.

Functional inactivation of a fraction of excitatory synapses in mice deficient for the active zone protein bassoon. Altrock WD, tom Dieck S, Sokolov M, Meyer AC, Sigler A, Brakebusch C, Fässler R, Richter K, Boeckers TM, Potschka H, Brandt C, et al.

Neuron (2003) 37(5): 787-800.

The presynaptic active zone protein bassoon is essential for photoreceptor ribbon synapse formation in the retina. Dick O, tom Dieck S, Altrock WD, Ammermüller J, Weiler R, Garner CC, Gundelfinger ED, Brandstätter JH Neuron (2003) 37(5): 775-86.