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

RIM 1

Cat.No. 140 005; Polyclonal Guinea pig antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Guinea pig serum albumin was added for stabilization. For reconstitution add 50 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**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 500 (see remarks) **IHC-P/FFPE**: not recommended
Immunogen	Recombinant protein corresponding to AA 596 to 705 from rat Rim1 (UniProt Id: Q9JIR4)
Reactivity	Reacts with: rat (Q9JIR4), mouse (Q99NE5). Other species not tested yet.
Specificity	Specific for RIM 1 with weak cross reactivity to RIM 2.
Remarks	**IHC**: This antibody requires antigen retrieval with pepsin according to: Lorincz A & Nusser Z (2008). recommended protocol

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

RIMs are presynaptic active zone proteins that regulate Ca^{2+} triggered release of neurotransmitters. RIM 1α and RIM 2α are composed of an N-terminal zinc-finger domain, a central PDZ domain and two C-terminal C2 domains that are seperated by long alternatively spliced sequences.
RIM 1α is a putative Rab 3a effector and has been shown to interact with other active zone proteins like Munc13-1, ERC 1b, ERC 2 and α-liprins. Deletion of RIM 1α in mice impaired neurotransmitter release without changing the structure of the synapse.

Selected General References

Genomic definition of RIM proteins: evolutionary amplification of a family of synaptic regulatory proteins.
Wang Y, Südhof TC
Genomics (2003) 81(2): 126-37.

RIM1alpha is required for presynaptic long-term potentiation.
Castillo PE, Schoch S, Schmitz F, Südhof TC, Malenka RC
Nature (2002) 415(6869): 327-30.

RIM1alpha forms a protein scaffold for regulating neurotransmitter release at the active zone.
Schoch S, Castillo PE, Jo T, Mukherjee K, Geppert M, Wang Y, Schmitz F, Malenka RC, Südhof TC
Nature (2002) 415(6869): 321-6.

The RIM/NIM family of neuronal C2 domain proteins. Interactions with Rab3 and a new class of Src homology 3 domain proteins.
Wang Y, Sugita S, Sudhof TC
The Journal of biological chemistry (2000) 275(26): 20033-44.

Rim is a putative Rab3 effector in regulating synaptic-vesicle fusion.
Wang Y, Okamoto M, Schmitz F, Hofmann K, Südhof TC
Nature (1997) 388(6642): 593-8.