RIM 1

**Cat.No. 140 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)**

**Data Sheet**

<table>
<thead>
<tr>
<th><strong>Reconstitution/Storage</strong></th>
<th>50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 µl H2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.</th>
</tr>
</thead>
</table>
| **Applications**          | WB: 1 : 100 up to 1 : 1000 (AP staining)  
                         | IP: not tested yet  
                         | IHC: yes, paraformaldehyde and methanol fixation  
                         | IHC-P/FFPE: 1 : 500 |
| **Immunogen**             | Recombinant protein corresponding to AA 596 to 705 from rat Rim1 (UniProt Id: Q9JIR4) |
| **Reactivity**            | Reacts with: human (Q86UR5), rat (Q9JIR4), mouse (Q99NES), hamster, chicken, frog. Other species not tested yet. |
| **Specificity**           | Specific for RIM 1 with weak cross reactivity to RIM 2. |

**Selected References SYSY Antibodies**

Active zone protein expression changes at the key stages of cerebellar cortex neurogenesis in the rat.  

Rab3a interacting molecule (RIM) and the tethering of pre-synaptic transmitter release site-associated CaV2.2 calcium channels.  
Wong PK, Stanley EF  

RIM1/2-Mediated Facilitation of CaV1.4 Channel Opening Is Required For Ca2+-Stimulated Release in Mouse Rod Photoreceptors.  
Graberner CJ, Gandini MA, Rehak R, Le Y, Zamponi GW, Schmitz F  

Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins.  

RIM, Munc13, and Rab3a interplay in acrosomal exocytosis.  
Bello OD, Zanetti MN, Mayorga LS, Michaut MA  

RIM C2B Domains Target Presynaptic Active Zone Functions to PIP2-Containing Membranes.  
de Jong APH, Roggers CM, Ho MR, Wong MY, Braulis CA, Rizo J, Kaeser PS  

Analysis of SUMO1-conjugation at synapses.  
Daniel JA, Cooper BH, Palvimo JJ, Zhang FP, Brose N, Tirard M  

Dynamic Partitioning of Synaptic Vesicle Pools by the SNARE-Binding Protein Tomosyn.  
Cazanés VA, Nius MM, Manly A, Saldate JJ, Subramani A, Ben-Simon Y, Sutliff MA, Ashery U, Szelenki EI.  

Epac2 Mediates cAMP-Dependent Potentiation of Neurotransmission in the Hippocampus.  
Fernandes HB, Riordan S, Nomura T, Remmers CL, Kraniotis S, Marshall JJ, Kukreja L, Vassar R, Contractor A  

Cannabinoid type 1 receptors transiently silence glutamatergic nerve terminals of cultured cerebellar granule cells.  
Ramírez-Franco J, Bartolomé-Martín D, Alonso B, Torres M, Sánchez-Prieto J  
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Studying synaptic efficiency by post-hoc immunolabelling.  
Ramírez-Franco J, Alonso B, Bartolomé-Martín D, Sánchez-Prieto J, Torres M  
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Molecular in situ topology of Acczoin/Picclo and associated proteins at the mammalian neurotransmitter release site.  

Early steps in the assembly of photoreceptor ribbon synapses in the mouse retina: the involvement of precursor spheres.  
Regus-Leidig H, Tom Dieck S, Specht D, Meyer L, Brandslätter JH  

Piccolo modulation of Synapsin1a dynamics regulates synaptic vesicle exocytosis.  

Binding to Rab3a-interacting molecule RIM regulates the presynaptic recruitment of Munc13-1 and ubMunc13-2.  
Andrews-Zwilling YS, Kawabe H, Reim K, Varoqueaux F, Brose N  

Impaired synapse function during postnatal development in the absence of CALEB, an EGF-like protein processed by neuronal activity.  

**NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS**

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