

RIM 2

Cat.No. 140 303; 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 : 1000 (AP staining) IP: yes ICC: not tested yet IHC: 1 : 1000 IHC-P/FFPE: not tested yet
Immunogen	Recombinant protein corresponding to AA 909 to 1076 from rat RIM2-4C (UniProt Id: Q9JIS1-3)
Reactivity	Reacts with: rat (Q9JIS1), mouse (Q9EQZ7). No signal: zebrafish. Other species not tested yet.
Specificity	Specific for RIM 2, no cross reactivity to RIM 1.
matching control	140-03P

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

RIMs are presynaptic active zone proteins that regulate Ca²⁺ 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 separated by long alternatively spliced sequences. RIM 2β consists of a specific N-terminus, the central PDZ domain and the C-terminal C2 domains. The mRNA for RIM 2β is transcribed from an internal promoter of the RIM 2α gene. Shorter variants of RIM 2 which comprise only the C-terminal C₂B domain and some flanking regions are referred to as NIM 2 / RIM 2γ and NIM 3 / RIM 3γ.

Selected References SYSY Antibodies

RIM1/2-Mediated Facilitation of Cav1.4 Channel Opening Is Required for Ca²⁺-Stimulated Release in Mouse Rod Photoreceptors.

Grabner CP, Gandini MA, Rehak R, Le Y, Zamponi GW, Schmitz F

The Journal of neuroscience : the official journal of the Society for Neuroscience (2015) 35(38): 13133-47. **IHC, WB**

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**

Deletion of the presynaptic scaffold CAST reduces active zone size in rod photoreceptors and impairs visual processing.

tom Dieck S, Specht D, Strenzke N, Hida Y, Krishnamoorthy V, Schmidt KF, Inoue E, Ishizaki H, Tanaka-Okamoto M, Miyoshi J, Hagiwara A, et al.

The Journal of neuroscience : the official journal of the Society for Neuroscience (2012) 32(35): 12192-203. **IHC; tested species: mouse**

Stability of active zone components at the photoreceptor ribbon complex.

Regus-Leidig H, Specht D, Tom Dieck S, Brandstätter JH

Molecular vision (2010) 16: 2690-700. **IHC**

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.

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, Südhof TC

The Journal of biological chemistry (2000) 275(26): 20033-44.