

# Rim2 Antibody

Catalog # ASC10694

## Product Information

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|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application</b>           | WB, IF, E, IHC-P                                                                                                                                                                                             |
| <b>Primary Accession</b>     | <a href="#">Q9UQ26</a>                                                                                                                                                                                       |
| <b>Other Accession</b>       | <a href="#">NP_001093587</a> , <a href="#">154354983</a>                                                                                                                                                     |
| <b>Reactivity</b>            | Human, Mouse, Rat                                                                                                                                                                                            |
| <b>Host</b>                  | Rabbit                                                                                                                                                                                                       |
| <b>Clonality</b>             | Polyclonal                                                                                                                                                                                                   |
| <b>Isotype</b>               | IgG                                                                                                                                                                                                          |
| <b>Calculated MW</b>         | 160403                                                                                                                                                                                                       |
| <b>Concentration (mg/ml)</b> | 1 mg/mL                                                                                                                                                                                                      |
| <b>Conjugate</b>             | Unconjugated                                                                                                                                                                                                 |
| <b>Application Notes</b>     | Rim2 antibody can be used for detection of Rim2 by Western blot at 1 $\mu$ g/mL. Antibody can also be used for immunohistochemistry starting at 5 $\mu$ g/mL. For immunofluorescence start at 20 $\mu$ g/mL. |

## Additional Information

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| <b>Gene ID</b>                      | 9699                                                                                                                                                                                                                                         |
| <b>Other Names</b>                  | Regulating synaptic membrane exocytosis protein 2, Rab-3-interacting molecule 2, RIM 2, Rab-3-interacting protein 3, RIMS2, KIAA0751, RAB3IP3, RIM2                                                                                          |
| <b>Target/Specificity</b>           | RIMS2; Multiple isoforms of RIM2 are known to exist. This antibody is predicted to have no cross-reactivity to other Rim proteins.                                                                                                           |
| <b>Reconstitution &amp; Storage</b> | Rim2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures. |
| <b>Precautions</b>                  | Rim2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.                                                                                                                                              |

## Protein Information

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| <b>Name</b>              | RIMS2                                                                                                                                                    |
| <b>Synonyms</b>          | KIAA0751, RAB3IP3, RIM2                                                                                                                                  |
| <b>Function</b>          | Rab effector involved in exocytosis. May act as scaffold protein. Plays a role in dendrite formation by melanocytes (PubMed: <a href="#">23999003</a> ). |
| <b>Cellular Location</b> | Cell membrane; Peripheral membrane protein. Synapse. Presynaptic cell membrane; Peripheral membrane protein                                              |

## Tissue Location

Widely expressed (PubMed:32470375). Expressed in melanocytes (PubMed:23999003). In fetal tissues, predominantly expressed in the brain (PubMed:32470375). In the retina, expressed in the outer plexiform layer (at protein level) (PubMed:32470375). In the cerebellum, expressed in Purkinje cells (at protein level) (PubMed:32470375). In the pancreas, expressed in Langerhans islets (at protein level) (PubMed:32470375).

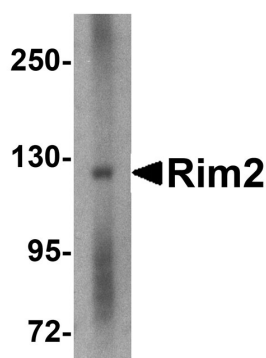
## Background

**Rim2 Antibody:** Rab3-interacting molecules (RIMs) are synaptic proteins necessary for neuronal transmission and plasticity. Rim1 and Rim2 proteins are expressed in overlapping but distinct patterns throughout the brain. While the ablation of either gene was not lethal in mice, the deletion of both resulted in postnatal mortality. This lethality is due to a defect in neurotransmitter release; synapses without RIM proteins can still release neurotransmitters but are unable to do so in response to normal  $\text{Ca}^{2+}$  triggers. Like Rim1, Rim 2 is thought to be an effector protein for Rab3, binding to Rab3 on synaptic vesicles in a GTP-dependent manner.

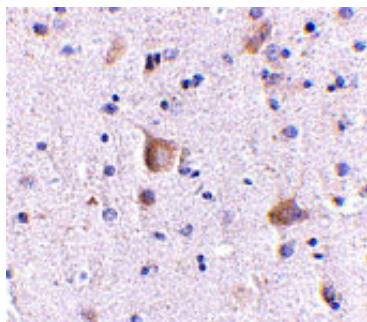
## References

Wang Y, Sugita S, and Sudhof TC. The RIM/NIM family of neuronal C2 domain proteins: interactions with Rab3 and a new class of Src homology 3 domain proteins. *J. Biol. Chem.* 2000; 275:20033-44.  
Liang F, Zhang B, Tang J, et al. RIM3gamma is a postsynaptic protein in the rat central nervous system. *J. Comp. Neurol.* 2007; 503:501-10.  
Shoch S, Mittelstaedt T, Kaeser PS, et al. Redundant functions of RIM1a and RIM2a in  $\text{Ca}^{2+}$ -triggered neurotransmitter release. *EMBO J.* 2006; 25:5852-63.

## Images

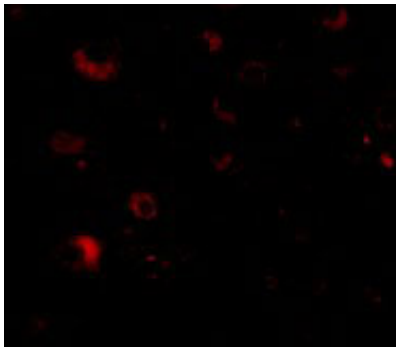


Western blot analysis of Rim2 in human brain tissue lysate with Rim2 antibody at 1  $\mu\text{g/mL}$ .



Immunohistochemistry of Rim2 in human brain with Rim2 antibody at 5  $\mu\text{g/mL}$ .

Immunofluorescence of Rim2 in Human Brain tissue with Rim2 antibody at 20  $\mu\text{g/mL}$ .



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