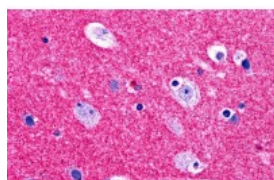




## RIM2 Antibody

CATALOG NUMBER: 4447



Immunohistochemistry of RIM2 in human  
brain tissue with RIM2 antibody at 5 ug/ml

### Specifications

<b>SPECIES REACTIVITY:</b>	Human
<b>HOMOLOGY:</b>	Predicted species reactivity based on immunogen sequence: Mouse: (100%)
<b>TESTED APPLICATIONS:</b>	ELISA, IHC-P
<b>APPLICATIONS:</b>	RIM2 antibody can be used for detection of RIM2 by immunohistochemistry at 5 ug/mL.
<b>USER NOTE:</b>	Optimal dilutions for each application to be determined by the researcher.
<b>POSITIVE CONTROL:</b>	1) Cat. No. 10-301 - Human Brain Tissue Slide
<b>SPECIFICITY:</b>	RIM2 antibody is human specific. Multiple isoforms of RIM2 are known to exist.
<b>IMMUNOGEN:</b>	RIM2 antibody was raised against a 17 amino acid synthetic peptide near the center of human RIM2.  The immunogen is located within amino acids 840 - 890 of RIM2.
<b>HOST SPECIES:</b>	Rabbit

### Properties

<b>PURIFICATION:</b>	RIM2 Antibody is affinity chromatography purified via peptide column.
<b>PHYSICAL STATE:</b>	Liquid
<b>BUFFER:</b>	RIM2 Antibody is supplied in PBS containing 0.02% sodium azide.
<b>CONCENTRATION:</b>	1 mg/mL
<b>STORAGE CONDITIONS:</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>CLONALITY:</b>	Polyclonal
<b>ISOTYPE:</b>	IgG
<b>CONJUGATE:</b>	Unconjugated

### Additional Info

<b>ALTERNATE NAMES:</b>	RIM2 Antibody: OBOE, RIM2, RAB3IP3, KIAA0751, Regulating synaptic membrane exocytosis protein 2, Rab-3-interacting molecule 2, RIM 2
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ACCESSION NO.: NP\_001093587

PROTEIN GI NO.: 154354983

OFFICIAL SYMBOL: RIMS2

GENE ID: 9699

## Background

**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, Rim2 is thought to be an effector protein for Rab3, binding to Rab3 on synaptic vesicles in a GTP-dependent manner.

**REFERENCES:**

- 1) 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.
- 2) 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.
- 3) Shoch S, Mittelstaedt T, Kaeser PS, et al. Redundant functions of RIM1 $\alpha$  and RIM2 $\alpha$  in  $\text{Ca}^{2+}$ -triggered neurotransmitter release. *EMBO J.* 2006; 25:5852-63.

FOR RESEARCH USE ONLY

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