

RIM2 Antibody

Catalog # ASC10633

Product Information

Application	E, IHC-P
Primary Accession	Q9UQ26
Other Accession	NP_001093587 , 154354983
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	160403
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	RIM2 antibody can be used for detection of RIM2 by immunohistochemistry at 5 µg/mL.

Additional Information

Gene ID	9699
Other Names	Regulating synaptic membrane exocytosis protein 2, Rab-3-interacting molecule 2, RIM 2, Rab-3-interacting protein 3, RIMS2, KIAA0751, RAB3IP3, RIM2
Target/Specificity	RIMS2; RIM2 antibody is human specific. Multiple isoforms of RIM2 are known to exist.
Reconstitution & Storage	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.
Precautions	RIM2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RIMS2
Synonyms	KIAA0751, RAB3IP3, RIM2
Function	Rab effector involved in exocytosis. May act as scaffold protein. Plays a role in dendrite formation by melanocytes (PubMed: 23999003).
Cellular Location	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).

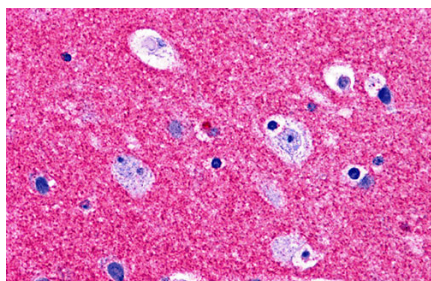
Background

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 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

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 RIM1 α and RIM2 α in Ca^{2+} -triggered neurotransmitter release. *EMBO J.* 2006; 25:5852-63.

Images



Immunohistochemistry of RIM2 in human brain tissue with RIM2 antibody at 5 $\mu\text{g}/\text{ml}$

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.