10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Repulsive Guidance Molecule B Rabbit pAb

Repulsive Guidance Molecule B Rabbit pAb
Catalog # AP54517

Product Information

Application	WB
Primary Accession	Q6NW40
Reactivity	Pig, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	47547
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human RGMB
Epitope Specificity	58-160/437
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane; Lipid-anchor, GPI-anchor (By similarity). Membrane raft
SIMILARITY	Belongs to the repulsive guidance molecule (RGM) family.
SUBUNIT	Homooligomer (By similarity). Interacts with DRGX (By similarity). Interacts with BMP2 and BMP4 (By similarity). Interacts with the BMP type I receptors ACVR1, BMPR1A and BMPR1B and with the BMP type II receptor ACVR2B
Post-translational modifications	GPI-anchored.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The repulsive guidance molecule (RGM) family of proteins are important in the guidance of growth cones of developing neurons. They are repulsive for a group of axons, those from the temporal half of the retina. RGM have been implicated in both axonal guidance and neural tube closure but as opposed to for ephrins, semaphorins, netrins and slits, no receptor mechanism for RGM activation has been defined. Dorsal root ganglion axons do not respond to RGM but neogenin (a netrin-binding protein which can function as an RGM receptor) expression can spur RGM responsiveness. The RGM proteins are attached to the membrane by a GPI-anchor. Two members of this family, RGMa and RGMb, are expressed in the nervous system. RGMc, also known as Hemojuvelin, is a part of the signaling pathway activating hepcidin and works together with hepcidin to restrict iron absorption in the gut. Defects in the gene encoding for RGMc causes the autosomal recessive disorder juvenile hemochromatosis (JH).

Additional Information

Gene ID	285704
Other Names	Repulsive guidance molecule B, DRG11-responsive axonal guidance and

	outgrowth of neurite, RGMB {ECO:0000303|PubMed:19324014, ECO:0000312|HGNC:HGNC:26896}
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

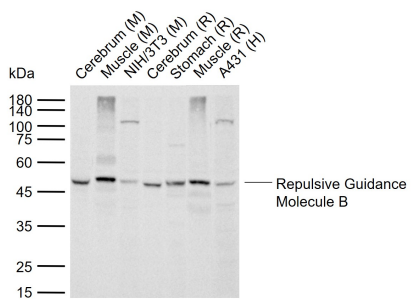
Protein Information

Name	RGMB {ECO:0000303|PubMed:19324014, ECO:0000312|HGNC:HGNC:26896}
Function	Member of the repulsive guidance molecule (RGM) family that contributes to the patterning of the developing nervous system (By similarity). Acts as a bone morphogenetic protein (BMP) coreceptor that potentiates BMP signaling (By similarity). Promotes neuronal adhesion (By similarity). May inhibit neurite outgrowth.
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:Q7TQ33}; Lipid-anchor, GPI-anchor {ECO:0000250|UniProtKB:Q7TQ33}. Membrane raft {ECO:0000250|UniProtKB:Q7TQ33}

Background

The repulsive guidance molecule (RGM) family of proteins are important in the guidance of growth cones of developing neurons. They are repulsive for a group of axons, those from the temporal half of the retina. RGM have been implicated in both axonal guidance and neural tube closure but as opposed to for ephrins, semaphorins, netrins and slits, no receptor mechanism for RGM activation has been defined. Dorsal root ganglion axons do not respond to RGM but neogenin (a netrin-binding protein which can function as an RGM receptor) expression can spur RGM responsiveness. The RGM proteins are attached to the membrane by a GPI-anchor. Two members of this family, RGMa and RGMb, are expressed in the nervous system. RGMc, also known as Hemojuvelin, is a part of the signaling pathway activating hepcidin and works together with hepcidin to restrict iron absorption in the gut. Defects in the gene encoding for RGMc causes the autosomal recessive disorder juvenile hemochromatosis (JH).

Images



Sample:
Lane 1: Mouse Cerebrum tissue lysates
Lane 2: Mouse Muscle tissue lysates
Lane 3: Mouse NIH/3T3 cell lysates
Lane 4: Rat Cerebrum tissue lysates
Lane 5: Rat Stomach tissue lysates
Lane 6: Rat Muscle tissue lysates
Lane 7: Human A431 cell lysates
Primary: Anti-Repulsive Guidance Molecule B (AP54517) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 40 kDa
Observed band size: 48 kDa