

# RGMc (C20): sc-517447

## 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).

## REFERENCES

1. Matsunaga, E. and Chedotal, A. 2004. Repulsive guidance molecule/neogenin: a novel ligand-receptor system playing multiple roles in neural development. *Dev. Growth Differ.* 46: 481-486.
2. Matsunaga, E., Tauszig-Delamasure, S., Monnier, P.P., Mueller, B.K., Strittmatter, S.M., Mehlen, P. and Chedotal, A. 2004. RGM and its receptor neogenin regulate neuronal survival. *Nat. Cell Biol.* 6: 749-755.
3. Rajagopalan, S., Deitinghoff, L., Davis, D., Conrad, S., Skutella, T., Chedotal, A., Mueller, B.K. and Strittmatter, S.M. 2004. Neogenin mediates the action of repulsive guidance molecule. *Nat. Cell Biol.* 6: 756-762.
4. Oldekamp, J., Kramer, N., Alvarez-Bolado, G. and Skutella, T. 2004. Expression pattern of the repulsive guidance molecules RGM A, B and C during mouse development. *Gene Expr. Patterns* 4: 283-288.

## CHROMOSOMAL LOCATION

Genetic locus: HFE2 (human) mapping to 1q21.1.

## SOURCE

RGMc (C20) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 234-416 of RGMc of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

RGMc (C20) is recommended for detection of RGMc of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

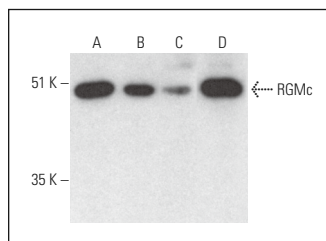
Suitable for use as control antibody for RGMc siRNA (h): sc-45738, RGMc shRNA Plasmid (h): sc-45738-SH and RGMc shRNA (h) Lentiviral Particles: sc-45738-V.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or human platelet extract: sc-363773.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



RGMc (C20): sc-517447. Western blot analysis of RGMc expression in 293T (A), HeLa (B) and Hep G2 (C) whole cell lysates and human platelet tissue extract (D).

## RESEARCH USE

For research use only, not for use in diagnostic procedures.