

Code No. 28045

**Anti-Rat
RGMa Rabbit IgG Affinity Purify**Volume : 100 µg

Introduction : RGMa (Repulsive Guidance Molecule a) is a GIP-anchored protein, about 33 kDa, and it is implicated in axonal guidance and neural tube closure of embryonic retina (ref. 1, 2, 3). It has reported as a potent inhibitor of axonal regeneration in the adult central nervous system (CNS). It is speculated that RGMa inhibits neurite outgrowth by activating the RhoA-Rho kinase signaling pathway *in vitro*. While, it has reported that, in a rat SCI (spinal cord injury) model, neurite outgrowth is enhanced by administration of anti-RGMa antibody to lesion site, resulting they are improved in motor functional recovery (ref. 4). Thus function analysis of RGMa is attracting attention in a research field of axonal regeneration of CNS.

This antibody detects rat RGMa and can be used for western blotting, immuno-precipitation and FACS analysis. And it is also reported that administration of the antibody to cerebellar granule cells of 6 - 8 days-old rat, *in vitro*, neutralizes RGMa-dependent inhibition of neurite outgrowth (ref. 4).

Antigen : Synthetic peptide of a part of Rat RGMa (DFQAFRANAESPRR)

Purification : Purified with antigen peptide

Form : Lyophilized product from 1 % BSA in PBS containing 0.05 % NaN₃

How to use : 1.0 mL deionized water will be added to the product (the conc. comes up 100 µg /mL)

Stability : Lyophilized product, 5 years at 2 – 8 °C
: Solution, 2 years at –20 °C

Application : This antibody can be used for western blotting in concentration of 0.5 - 2 µg /mL.
: This antibody can be used for immuno-precipitation in concentration of 1 - 3 µg /mL.
: This antibody can be used for FACS analysis at 0.02 – 0.2 µg (per 1×10⁶ cells).
*This product cannot be used for neutralization test.

Specificity : Reacts with rat RGMa (confirmed by western blotting with transfectant).

Reference : 1. Mueller BK, Yamashita T, Schaffar G, Mueller R. The role of repulsive guidance molecules in the embryonic and adult vertebrate central nervous system. *Philos Trans R Soc Lond B Biol Sci.* 2006 Sep 29;361(1473):1513-29.
2. Schwab JM, Conrad S, Monnier PP, Julien S, Mueller BK, Schluesener HJ. Spinal cord injury-induced lesional expression of the repulsive guidance molecule (RGM). *Eur J Neurosci.* 2005 Mar;21(6):1569-76.
3. Yamashita T, Mueller BK, Hata K. Neogenin and repulsive guidance molecule signaling in the central nervous system. *Curr Opin Neurobiol.* 2007 Feb;17(1):29-34.
4. Hata K, Fujitani M, Yasuda Y, Doya H, Saito T, Yamagishi S, Mueller BK, Yamashita T. RGMa inhibition promotes axonal growth and recovery after spinal cord injury. *J Cell Biol.* 2006 Apr 10;173(1):47-58.

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