

## RGMA Protein, Human (His)

<b>Cat. No.:</b>	HY-P71003
<b>Synonyms:</b>	Repulsive guidance molecule A; RGM domain family member A; RGM
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	AAI51133.1 (P169-G422)
<b>Gene ID:</b>	56963
<b>Molecular Weight:</b>	Approximately 30.0 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>           P H L R T F T D R F    Q T C K V Q G A W P    L I D N N Y L N V Q    V T N T P V L P G S            A A T A T S K L T I    I F K N F Q E C V D    Q K V Y Q A E M D E    L P A A F V D G S K            N G G D K H G A N S    L K I T E K V S G Q    H V E I Q A K Y I G    T T I V V R Q V G R            Y L T F A V R M P E    E V V N A V E D W D    S Q G L Y L C L R G    C P L N Q Q I D F Q            A F H T N A E G T G    A R R L A A A S P A    P T A P E T F P Y E    T A V A K C K E K L            P V E D L Y Y Q A C    V F D L L T T G D V    N F T L A A Y Y A L    E D V K M L H S N K            D K L H L Y E R T R    D L P G         </p>
<b>Appearance</b>	Solution.
<b>Formulation</b>	Supplied as a 0.2 µm filtered solution of 20 mM Tris-HCl, 1 mM DTT, 150 mM NaCl, 1 mM EDTA, pH 8.0.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	N/A
<b>Storage &amp; Stability</b>	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
<b>Shipping</b>	Shipping with dry ice.

### DESCRIPTION

<b>Background</b>	<p>Repulsive guidance molecule A (RGMA) is a member of the repulsive guidance molecule family. RGMA is a glycosylphosphatidylinositol-anchored glycoprotein that functions as an axon guidance protein in the developing and adult central nervous system. RGMA regulates cephalic neural tube closure, inhibits neurite outgrowth and cortical neuron branching, and the formation of mature synapses. RGMA induces activation of RHOA-ROCK1/Rho-kinase signaling pathway through UNC5B-ARHGEF12/LARG-PTK2/FAK1 cascade by Binding to receptor NEO1/neogenin, leading to collapse of the neuronal growth cone and neurite outgrowth inhibition. NEO1/neogenin binding of RGMA leads to HRAS inactivation by</p>
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influencing HRAS-PTK2/FAK1-AKT1 pathway as well. RGMA also functions as a bone morphogenetic protein (BMP) coreceptor that may signal through SMAD1, SMAD5, and SMAD8. RGMA may also function as a tumor suppressor in some cancers<sup>[1][2][3]</sup>.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA