

For Research Use Only

# RGMA Polyclonal antibody

Catalog Number: 12387-1-AP

Featured Product

2 Publications



## Basic Information

### Catalog Number:

12387-1-AP

### Size:

150ul, Concentration: 700 ug/ml by Nanodrop;

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG3058

### GenBank Accession Number:

BC015886

### GeneID (NCBI):

56963

### UNIPROT ID:

Q96B86

### Full Name:

RGM domain family, member A

### Calculated MW:

450 aa, 49 kDa

### Observed MW:

49 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB 1:500-1:1000

IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC 1:50-1:500

## Applications

### Tested Applications:

WB, IP, IHC, ELISA

### Cited Applications:

WB, ColP

### Species Specificity:

human, mouse, rat

### Cited Species:

rat, mouse

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

### Positive Controls:

**WB**: COLO 320 cells, mouse testis tissue, HeLa cells, MOLT-4 cells, U2OS cells, Caco-2 cells, K-562 cells, mouse brain tissue, rat brain tissue

**IP**: mouse testis tissue,

**IHC**: human brain tissue,

## Background Information

RGMA, also named as RGM, is a member of the repulsive guidance molecule (RGM) family that performs several functions in the developing and adult nervous system. It regulates cephalic neural tube closure, inhibits neurite outgrowth and cortical neuron branching, and the formation of mature synapses. RGMA binding to its receptor NEO1/neogenin induces activation of RHOA-ROCK1/Rho-kinase signaling pathway through UNC5B-ARHGEF12/LARG-PTK2 cascade, leading to collapse of the neuronal growth cone and neurite outgrowth inhibition. Furthermore, RGMA binding to NEO1/neogenin leads to HRAS inactivation by influencing HRAS1-PTK2-AKT1 pathway. It also functions as a bone morphogenetic protein (BMP) coreceptor that may signal through SMAD1, SMAD5, and SMAD8. RGMA is a molecular target for neuroprotection in retinal pathologies (PMID: 20457227). the frequent genetic and epigenetic inactivation of RGMA in CRCs and adenomas along with its in vitro function collectively support its role as a tumor suppressor in colon cells (PMID: 19303019). There're some different MW in WB detection, 30 kDa mature form, 47-50 kDa isoforms and 60 kDa Glycosylated form.

## Notable Publications

| Author         | Pubmed ID | Journal        | Application |
|----------------|-----------|----------------|-------------|
| Min Li         | 29935233  | Brain Res Bull | WB          |
| Mikito Shimizu | 37992159  | Sci Adv        | ColP        |

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

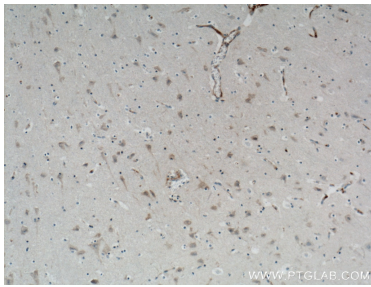
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

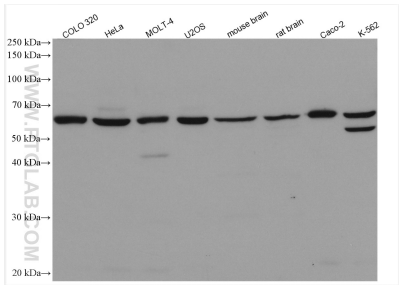
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

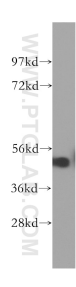
Selected Validation Data



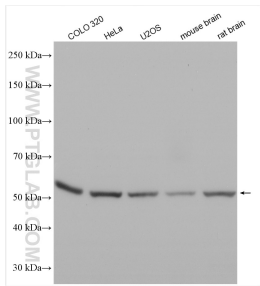
Immunohistochemical analysis of paraffin-embedded human brain tissue slide using 12387-1-AP (RGMA antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



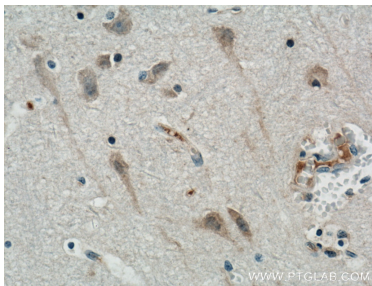
Various lysates were subjected to SDS PAGE followed by western blot with 12387-1-AP (RGMA antibody) at dilution of 1:800 incubated at room temperature for 1.5 hours.



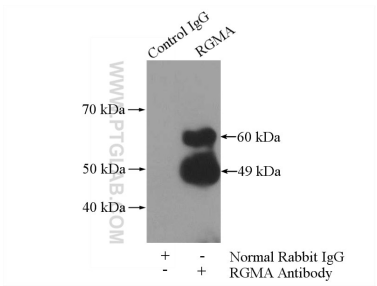
mouse testis tissue were subjected to SDS PAGE followed by western blot with 12387-1-AP (RGMA antibody) at dilution of 1:400 incubated at room temperature for 1.5 hours.



Various lysates were subjected to SDS PAGE followed by western blot with 12387-1-AP (RGMA antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human brain tissue slide using 12387-1-AP (RGMA antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



IP result of anti-RGMA (IP:12387-1-AP, 4ug; Detection:12387-1-AP 1:400) with mouse testis tissue lysate 4000ug.