



Rabbit Anti-GEM antibody

SL13331R

Product Name:	GEM
Chinese Name:	GTP结合丝裂原诱导T细胞蛋白抗体
Alias:	GTP binding mitogen induced T cell protein; GTP binding protein expressed in mitogen stimulated T cells; GTP binding protein GEM; GTP binding protein overexpressed in skeletal muscle; Kinase inducible Ras like protein; KIR; MGC26294; RAS like protein KIR; GEM_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	34kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human GEM:201-296/296
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.
PubMed:	PubMed
Product Detail:	Gem belongs to the Rad/Gem/Kir (RGK) subfamily of Ras-related GTPases, which lack typical C-terminal amino acid motifs for isoprenylation. Rad and Gem bind calmodulin in a Ca ²⁺ -dependent manner via this C-terminal extension, involving residues 278–297 in human Rad. High intracellular Gem levels, which interact with intact microtubules

and microfilaments, promote profound changes in cell morphology. Ectopic Gem expression is sufficient to stimulate cell flattening and neurite extension in N1E-115 and SH-SY5Y neuroblastoma cells, suggesting a role for Gem in cytoskeletal rearrangement and/or morphological differentiation of neurons. Gem was also observed in developing trigeminal nerve ganglia in 12.5 day mouse embryos, demonstrating that Gem expression is a property of normal ganglionic development. The interaction of Gem with beta-subunits regulates Ca²⁺ channel expression at the cell surface. The human Gem gene maps to chromosome 8q22.1.

Function:

GEM belongs to the RAD/GEM family of GTP-binding proteins. It could be a regulatory protein, possibly participating in receptor-mediated signal transduction at the plasma membrane. GEM has guanine nucleotide-binding activity but undetectable intrinsic GTPase activity. Alternative splicing occurs at this locus and two transcript variants encoding the same protein have been identified.

Subunit:

Interacts with calmodulin in a Ca(2+)-dependent manner. Binds ROCK1.

Subcellular Location:

Cell membrane; Peripheral membrane protein; Cytoplasmic side.

Tissue Specificity:

Most abundant in thymus, spleen, kidney, lung, and testis. Less abundant in heart, brain, liver and skeletal muscle.

Post-translational modifications:

Phosphorylated on tyrosine residues.

Similarity:

Belongs to the small GTPase superfamily. RGK family.

SWISS:

P55040

Gene ID:

2669

Database links:

[Entrez Gene: 2669](#)Human

[Entrez Gene: 14579](#)Mouse

[Entrez Gene: 297902](#)Rat

[Omim: 600164](#)Human

[SwissProt: P55040](#)Human

[SwissProt: P55041](#)Mouse

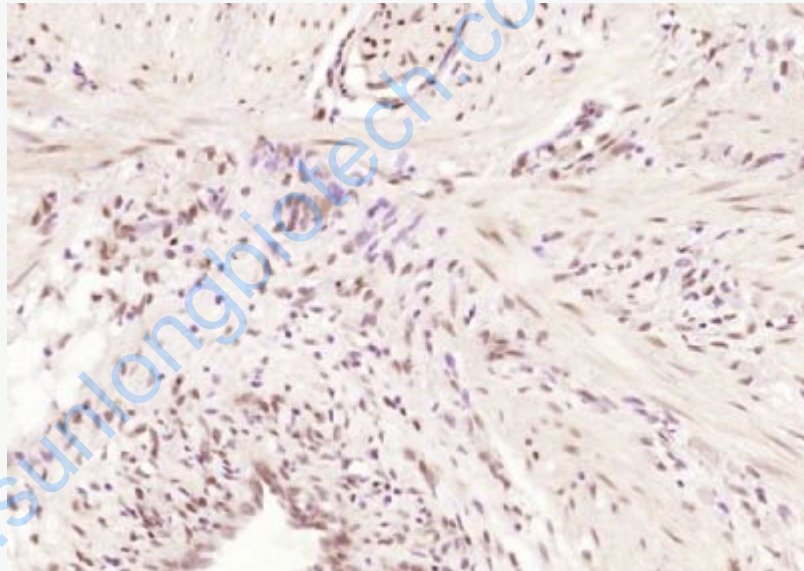
[Unigene: 654463](#)Human

[Unigene: 247486](#)Mouse

[Unigene: 40436](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

Paraformaldehyde-fixed, paraffin embedded (human gastric carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (GEM) Polyclonal Antibody, Unconjugated (SL13331R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.