10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RGS19 Antibody (S151)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1820f

Product Information

Application	WB, IHC-P, E
Primary Accession	P49795
Other Accession	O70521, Q9CX84, Q08DC7
Reactivity	Human, Mouse
Predicted	Bovine, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB11892
Calculated MW	24636
Antigen Region	131-156

Additional Information

Gene ID	10287
Other Names	Regulator of G-protein signaling 19, RGS19, G-alpha-interacting protein, GAIP, RGS19, GAIP, GNAI3IP
Target/Specificity	This RGS19 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 131-156 amino acids from human RGS19.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RGS19 Antibody (S151) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RGS19
Synonyms	GAIP, GNAI3IP

Function	Inhibits signal transduction by increasing the GTPase activity of G protein alpha subunits thereby driving them into their inactive GDP-bound form. Binds to G-alpha subfamily 1 members, with the order G(i)a3 > G(i)a1 > G(o)a >> G(z)a/G(i)a2. Activity on G(z)-alpha is inhibited by phosphorylation and palmitoylation of the G-protein.
Cellular Location	Membrane; Lipid-anchor.
Tissue Location	Highest expression in lung. Placenta, liver and heart also express high levels of GAIP

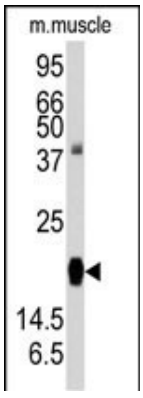
Background

RGS19 enhances the intrinsic GTPase-activating protein activity of the Galphai3 protein, which stimulates autophagy by favoring the GDP-bound form of Galphai3. Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole).

References

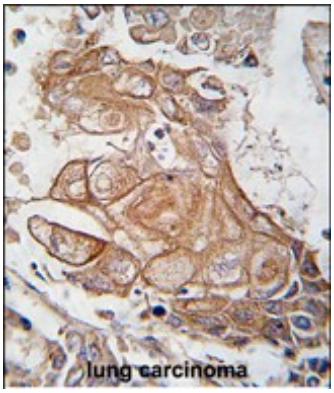
Baehrecke EH. Nat Rev Mol Cell Biol. 6(6):505-10. (2005)
Lum JJ, et al. Nat Rev Mol Cell Biol. 6(6):439-48. (2005)
Greenberg JT. Dev Cell. 8(6):799-801. (2005)
Levine B. Cell. 120(2):159-62. (2005)
Shintani T and Klionsky DJ. Science. 306(5698):990-5. (2004)
de Vries L., et al. PNAS 93:15203-15208(1996)
de Alba E., et al. J. Mol. Biol. 291:927-939(1999)
Wang J., et al. J. Biol. Chem. 273:26014-26025(1998)
Ogier-Denis E., et al. J. Biol. Chem. 275:39090-39095(2000)

Images



Western blot analysis of anti-RGS19 Antibody (S151) (Cat.#AP1820f) in mouse muscle tissue lysates (35ug/lane). RGS19(arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with Phospho-RGS19-pS151.ctrl antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.