

**Goat Anti-RGS14 Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1925a****Specification**

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**Goat Anti-RGS14 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">O43566</a>
Other Accession	<a href="#">NP_006471</a> , <a href="#">10636</a>
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	61447

**Goat Anti-RGS14 Antibody - Additional Information****Gene ID** 10636**Other Names**

Regulator of G-protein signaling 14, RGS14, RGS14

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-RGS14 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-RGS14 Antibody - Protein Information****Name** RGS14**Function**

Regulates G protein-coupled receptor signaling cascades. Inhibits signal transduction by increasing the GTPase activity of G protein alpha subunits, thereby driving them into their inactive GDP-bound form. Besides, modulates signal transduction via G protein alpha subunits by functioning as a GDP-dissociation inhibitor (GDI). Has GDI activity on G(i) alpha subunits GNAI1 and GNAI3, but not on GNAI2 and G(o)-alpha subunit GNAO1. Has GAP activity on GNAI0, GNAI2 and GNAI3. May act as a scaffold integrating G protein and Ras/Raf MAPkinase signaling pathways. Inhibits platelet-derived growth factor (PDGF)- stimulated ERK1/ERK2 phosphorylation; a process

depending on its interaction with HRAS and that is reversed by G(i) alpha subunit GNAI1. Acts as a positive modulator of microtubule polymerisation and spindle organization through a G(i)-alpha-dependent mechanism. Plays a role in cell division. Required for the nerve growth factor (NGF)-mediated neurite outgrowth. Involved in stress resistance. May be involved in visual memory processing capacity and hippocampal-based learning and memory.

#### Cellular Location

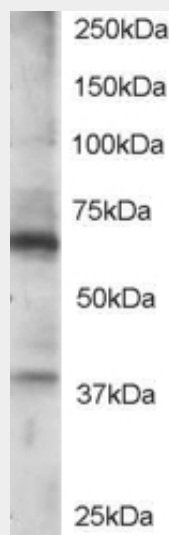
Nucleus. Nucleus, PML body. Cytoplasm. Membrane. Cell membrane. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, spindle pole. Cell projection, dendrite. Cell projection, dendritic spine Postsynaptic density. Note=Associates with the perinuclear sheaths of microtubules (MTs) surrounding the pronuclei, prior to segregating to the anastral mitotic apparatus and subsequently the barrel-shaped cytoplasmic bridge between the nascent nuclei of the emerging 2-cell embryo. Localizes to a perinuclear compartment near the microtubule-organizing center (MTOC). Expressed in the nucleus during interphase and segregates to the centrosomes and astral MTs during mitosis. Relocalizes to the nucleus in PML nuclear bodies in response to heat stress. Colocalizes with RIC8A in CA2 hippocampal neurons Localizes to spindle poles during metaphase. Shuttles between the nucleus and cytoplasm in a CRM1-dependent manner. Recruited from the cytosol to the plasma membrane by the inactive GDP-bound forms of G(i) alpha subunits GNAI1 and GNAI3. Recruited from the cytosol to membranes by the active GTP-bound form of HRAS. Colocalizes with G(i) alpha subunit GNAI1 and RIC8A at the plasma membrane. Colocalizes with BRAF and RAF1 in both the cytoplasm and membranes (By similarity)

#### Goat Anti-RGS14 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Goat Anti-RGS14 Antibody - Images



AF1925a staining (0.5 µg/ml) of Jurkat lysate (RIPA buffer, 35 µg total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence.

### **Goat Anti-RGS14 Antibody - Background**

This gene encodes a member of the regulator of G-protein signaling family. This protein contains one RGS domain, two Raf-like Ras-binding domains (RBDs), and one GoLoco domain. The protein attenuates the signaling activity of G-proteins by binding, through its GoLoco domain, to specific types of activated, GTP-bound G alpha subunits. Acting as a GTPase activating protein (GAP), the protein increases the rate of conversion of the GTP to GDP. This hydrolysis allows the G alpha subunits to bind G beta/gamma subunit heterodimers, forming inactive G-protein heterotrimers, thereby terminating the signal. Alternate transcriptional splice variants of this gene have been observed but have not been thoroughly characterized.

### **Goat Anti-RGS14 Antibody - References**

Genetic Variations in Regulator of G-Protein Signaling Genes as Susceptibility Loci for Second Primary Tumor/Recurrence in Head and Neck Squamous Cell Carcinoma. Wang J, et al. Carcinogenesis, 2010 Jul 12. PMID 20627871.

RGS14 is a multifunctional scaffold that integrates G protein and Ras/Raf MAPkinase signalling pathways. Shu FJ, et al. Cell Signal, 2010 Mar. PMID 19878719.

Backbone and sidechain 1H, 13C and 15N resonance assignments of the RGS domain from human RGS14. Dowler EF, et al. Biomol NMR Assign, 2007 Jul. PMID 19636837.

Towards a proteome-scale map of the human protein-protein interaction network. Rual JF, et al. Nature, 2005 Oct 20. PMID 16189514.

RGS14 is a microtubule-associated protein. Martin-McCaffrey L, et al. Cell Cycle, 2005 Jul. PMID 15917656.