

**RGS14 Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP16695c****Specification**

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**RGS14 Antibody (Center) Blocking Peptide - Product Information**Primary Accession [O43566](#)**RGS14 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 10636**Other Names**

Regulator of G-protein signaling 14, RGS14, RGS14

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**RGS14 Antibody (Center) Blocking Peptide - 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)

### **RGS14 Antibody (Center) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

### **RGS14 Antibody (Center) Blocking Peptide - Images**

### **RGS14 Antibody (Center) Blocking Peptide - Background**

This gene encodes a member of the regulator of G-proteinsignaling family. This protein contains one RGS domain, twoRaf-like Ras-binding domains (RBDs), and one GoLoco domain. Theprotein 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 toGDP. This hydrolysis allows the G alpha subunits to bind Gbeta/gamma subunit heterodimers, forming inactive G-proteinheterotrimers, thereby terminating the signal. Alternatetranscriptional splice variants of this gene have been observed buthave not been thoroughly characterized.

### **RGS14 Antibody (Center) Blocking Peptide - References**

Wang, J., et al. Carcinogenesis 31(10):1755-1761(2010)Kottgen, A., et al. Nat. Genet. 42(5):376-384(2010)Shu, F.J., et al. Cell. Signal. 22(3):366-376(2010)Dowler, E.F., et al. Biomol NMR Assign 1(1):95-97(2007)Martin-McCaffrey, L., et al. Cell Cycle 4(7):953-960(2005)