

Anti-RGS14 Antibody

Catalog # ABO11474

Product Information

Application	WB
Primary Accession	O43566
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Regulator of G-protein signaling 14(RGS14) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	10636
Other Names	Regulator of G-protein signaling 14, RGS14, RGS14
Calculated MW	61447
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization 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 . Cell junction, synapse, postsynaptic cell membrane, postsynaptic density . 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). .

Source Eukaryota

Protein Name	Regulator of G-protein signaling 14
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human RGS14(359-372aa CTVLADQEVRLNR), identical to the related mouse and rat sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20° C for one year. After r° Constitution, at 4° C for one month. It° Can also be aliquotted and stored frozen at -20° C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Contains 1 GoLoco domain.

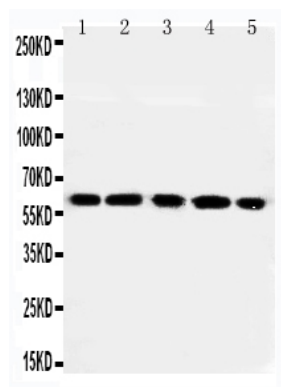
Protein Information

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 polymerization 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)

Background

Regulator of G-protein signaling 14, also called RGS14, is a protein that in humans is encoded by the RGS14 gene. This gene encodes a member of the regulator of G-protein signaling family. By genomic sequence analysis, this gene is mapped to chromosome 5q35.3. 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.

Images



Anti-RGS14 antibody, ABO11474, Western blotting
Lane 1: Rat Thymus Tissue Lysate
Lane 2: Rat Spleen Tissue Lysate
Lane 3: RAJI Cell Lysate
Lane 4: CEM Cell Lysate
Lane 5: JURKAT Cell Lysate

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