RGS14 Immunizing Blocking Peptide

PRODUCT OVERVIEW

Product Name	RGS14, Blocking Peptide
Full Product Name	RGS14 Immunizing Peptide
Product Gene Name	RGS14 blocking peptide
Product Synonym Names	RGS14; regulator of G-protein signalling 14; regulation of G protein signaling 14
Sequence	C-IGGSLNST TDSAL
Species Reactivity	Human
Form/Format	100ug of dried peptide
Preparation and Storage	Shipped at ambient temperature, store at -20 degree C
Antibody/Peptide Pairs	RGS14 peptide (MBS425124) is used for blocking the activity of RGS14 antibody (MBS421214)
Molecular Weight	36,922 Da
OMIM	602513
ISO Certification	Manufactured in an ISO 9001:2008 Certified Laboratory.
Related Product Information for RGS14 blocking peptide	MBS425124 is a blocking peptide targeting RGS14. Also known as RGS14 Immunizing Peptide. Reactive in Human.
Other Notes	Small volumes of RGS14 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RGS14. It may not necessarily be applicable to this product.

NCBI GI #	21361304
NCBI GeneID	10636
NCBI Accession #	NP_006471.2
UniProt Secondary Accession #	O43565; Q506M1; Q6ZWA4; Q8TD62
UniProt Related Accession #	O43566
GenBank Nucleotide #	NM_006480.4
NCBI Official Full Name	regulator of G-protein signaling 14
NCBI Official Synonym Full Names	regulator of G-protein signaling 14
NCBI Official Symbol	RGS14
UniProt Protein Name	Regulator of G-protein signaling 14
Protein Family	Regulator of G-protein signaling
UniProt Gene Name	RGS14
UniProt Synonym Gene Names	RGS14

UniProt Entry Name	RGS14_HUMAN
NCBI Protein Information	regulator of G-protein signaling 14
NCBI Summary for RGS14	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. [provided by RefSeq, Jul 2008]
UniProt Comments for RGS14	RGS14: Acts as a regulator of G protein signaling (RGS). Modulates G protein alpha subunits nucleotide exchange and hydrolysis activities by functioning either as a GTPase-activating protein (GAP), thereby driving G protein alpha subunits into their inactive GDP-bound form, or as a GDP-dissociation inhibitor (GDI). Confers GDI activity on G(i) alpha subunits GNAI1 and GNAI3, but not G(o) alpha subunit GNAO1 and G(i) alpha subunit GNAI2. Confers GAP activity on G(o) alpha subunit GNAI0 and G(i) alpha subunits 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 HRAS1 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. Probably required for the nerve growth factor (NGF)-mediated neurite outgrowth. May be involved in visual memory processing capacity and hippocampal-based learning and memory. 4 isoforms of the human protein are produced by alternative splicing. Protein type: GAPs, RGS; GAPs Chromosomal Location of Human Ortholog: 5q35.3 Cellular Component: cell junction; centrosome; cytoplasm; dendrite; dendritic spine; microtubule; nuclear body; nucleus; plasma membrane; PML body; postsynaptic density; postsynaptic membrane; spindle; spindle pole Molecular Function: G-protein alpha-subunit binding; GDP-dissociation inhibitor activity; GTPase activating protein binding; GTPase activator activity; microtubule binding; protein binding; protein kinase binding; receptor signaling complex scaffold activity; receptor signaling protein activity Biological Process: cell division; chromosome segregation; learning; long-term memory; mitosis; negative regulation of MAP kinase activity; negative regulation of synaptic plasticity; nucleocytoplasmic transport; platelet-derived growth factor receptor signaling pathway; positive regulation of GTPase activity; positive regulation of neurogenesis; regulation of G-protein coupled receptor protein signaling pathway; regulation of transcription in response to stress; response to oxidative stress; spindle organization and biogenesis; visual learning; zygote asymmetric cell division
Research Articles on RGS14	**1.** The RBD region associates with the RGS domain region, producing an intramolecular interaction within RGS14 that enhances the GTPase activating function.
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