

Product datasheet for **MG208709**

Rgs14 (NM_016758) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rgs14 (NM_016758) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Rgs14
Synonyms:	RPIP1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG208709 representing NM_016758
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCAGGAAGCCCAAGCACTTGGGTGTCCCAACGGGCGCATGTTTCTGGCTGTCTCAGATGGAGAAC
 TGACCAGCACTGCAGTTCCAGGCCAGGGTGGGGCAGAGGCAGCTCTCTCAGCATCCACAGCTCC
 TAGTGGCCCCAGCAGCCCTTCTCCACCGAGGAGCAGCCTGTGGCCAGCTGGGCCAGTCTTTGAGCGG
 CTGCTGCAAGACCCAGGGGTCTGGCTTACTTCACTGAGTTCTGAAGAAGGAATTCAGCGCAGAGAACG
 TAACCTTCTGGAAAGCCTGCGAACGTTTCCAGCAGATCCAGCCAGCGACACCAAGCAGCTAGCTCAGGA
 GGCCACAACATCTACCACGAGTTCTATCCAGCCAGGCGCTGAGCCAGTGAACATCGACCGACAGGCC
 TGGCTTAGTGAGGAGTGTGGCCAGCCCCGGCCAGATATGTTCCGAGCACAGCAGCTTCAGATCTTCA
 ATTTGATGAAGTTCGACAGCTATGCGCGCTTCGTCAAATCCCGCTGTACCAAGAGTGCCTGCTGGCGGA
 GGCCGAGGAGCGCCCCGCGGGAACCTGGCTCCTCACACCTCGGAGCCCGGACACAGCGAGGAAGAAG
 CCAAAGCTGAAGCCTGGGAAGTCACTGCCGCTGGGCGTGAAGAGTTGGGCGAGCTGCCACTCGCTGAGG
 GCCCTTGTGGCCGCCCTCTCCGCAAGTCTTTCGTAGAGAGATGACAGGTGGAGCCATGAATTCGGCCCT
 GCGACGAGAGTCTCAAGGGTCCCTGAATTTCTTCTGCCAGTCTGGACCTGGGTTTCCTTGCCTTTGTGAGC
 AGCAAATCTGAGAGTCACCGGAAGAGCCTTGAAGTGGAGAGAGTGGAGCGAGAGTGGCCCGGGGAAGT
 ATTGCTGCGTGTATCTACCTGACGGCACGGCTTCTTGGCCCTGGCTCGACTGGCTCACCATCCGAGA
 CATGCTGGCAGGCATCTGTGAGAAGAGAGGCCTCTCTGCTGACATTAAGGTCTACCTGGTGGCAAT
 GAACAGAAGGCCCTGGTCTGGATCAGGATTGCACCGTGTGGCAGACCAGGAAGTGCAGTGGAAAACA
 GGATCACCTTCCAGCTGGAGTTGGTCCGCTGGAGCGAGTGGTCCGGATCTCAGCTAAGCCACCAAGCG
 TCTGCAAGAGGCCCTGCAGCCCATCTGGCTAAGCATGGCCTGAGCCTGGACCAGGTGGTACTGCACAGG
 CCAGGAGAGAAGCAGCCATGGATTTGGAGAATCCAGTGAAGTCAAGTGGCCTCACAGACTGGTTTTGG
 AACTCTCCGGATGCAAAGATGAGTGAAGCCAGAAGCATATCCCCCTGCCGAGTCAAGGATGCCTCCC
 AAGAACCAGACCAAGGACAGTCACTTCCCCATCGTCTCCAGTTTGGTGGTGAAGATGCCAGTAGT
 TCTACTGGGAACCGCAGACCTGTGACATTGAAGGCTGGTGGAGCTGCTGAATCGGGTGCAGAGCAGCG
 GGGCCACGATCAGAGAGGACTTCTCGCAAAGAGGACCTGGTCTTCCAGAATTTCTGCAGCTTCTTCC
 CCAAAGACCAGGCTCTCGGGAGGCTCCACCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG208709 representing NM_016758
 Red=Cloning site Green=Tags(s)

MPGKPKHLGVPNGRMVLAUSDGELTSTAGSQAQGEGRGSSL SIHSLPSGPSSPFSTEEQPVASWAQSFER
 LLQDPRGLAYFTEFLKKEFSAENVTFWKACERFQQIPASDTKQLAQEAHNIYHEFLSSQALSPVNIDRQA
 WLSEEVL AQPRPDMFRAQLQIFNLMKFDSYARFVKSPLYQECLLAEAEGRPLREPGSSHLGSPDTARKK
 PKLKPGKSLPLGVEELGQLPLAEGPCGRPLRKSFRREMTGGAMNSALRRESQGSLSNSASLDLGFVAFVS
 SKSESHRKSLSGSESESRPGKYCCVYLPDGTASLALARPGLTIRDMLAGICEKRGSLPDIKVYLVGN
 EQKALVLDQDCTVLADQEVRLNRIITFQLELVGLERVVRI SAKPTKRLQEALQPI LAKHGLSLDQVVLHR
 PGEKQPMLENPVSSVASQTLVLDTPPDAMSEARSISPCRSQGCLPRTQTKDSHLPPSSSSLLVEDASS
 STGNRQTCIEGLVELLNRVQSSGAHDQRGLLRKEDLVLPFLQLPSQRPGSREAPP

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

ACCN:	NM_016758
ORF Size:	1641 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_016758.3
RefSeq Size:	2437 bp
RefSeq ORF:	1644 bp
Locus ID:	51791
UniProt ID:	P97492
Cytogenetics:	13 29.8 cM

Gene Summary:

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 completion of the first mitotic division of the embryo. Involved in visual memory processing capacity; when overexpressed in the V2 secondary visual cortex area. Involved in hippocampal-based learning and memory; acts as a suppressor of synaptic plasticity in CA2 neurons. Required for the nerve growth factor (NGF)-mediated neurite outgrowth. Involved in stress resistance.[UniProtKB/Swiss-Prot Function]