

Product datasheet for **RG205284**

RGS7 (NM_002924) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	RGS7
Mammalian Cell	Neomycin
Selection:	
Vector:	pCMV6-AC-GFP (PSI00010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence: >RG205284 representing NM_002924
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGC**

ATGGCCAGGGGAATAATTATGGGCAGACCAGCAACGGGGTGGCCGATGAATCACCCAACATGCTGGTGT
ACAGAAAGATGGAAGACGTCATAGCACGGATGCAAGATGAAAAAATGGAATTCCTATTCGTACGGTCAA
AAGCTTTCTTCCAGATACCTAGCGTCTTCTCTGGTTCAGACATTGTTCAATGGTTGATAAAGAACTTA
ACTATAGAAGATCCAGTGGAGGCGCTCCATTTGGGAACATTAATGGCTGCCACGGCTACTCTTTCCAA
TCTCAGATCATGTCCTCACACTCAAGGATGATGGCACCTTTTACCGGTTTCAAACCCCTATTTTGGCC
ATCAAATTGTTGGGAGCCGAAAAACACAGATTATGCCGTTTACCTCTGCAAGAGAACAATGCAAAACAAG
GCACGACTGGAGCTCGCAGACTATGAGGCTGAGAGCCTGGCCAGGCTGCAGAGAGCATTGGCCCGGAAGT
GGGAGTTCAATTTTATGCAAGCAGAAGCACAAGCAAAAGTGGACAAGAAGAGAGACAAGATTGAAAGGAA
GATCCTTGACAGCCAAGAGAGAGCGTTCTGGGACGTGCACAGGCCCGTGCCTGGATGTGTAATACTAACT
GAAGTGGACATTAAGAAGTCATCCAGAATGAGAAACCCCAACACGGAAGTCTGTCTATGGTTTAC
AAAATGATATTAGAAGTCACAGTCTACCCACACACCCACACAGAACTAAACCTCCAACAGAAGATGA
GTTACAACAACAGATAAAATATTGGCAATACAGTTAGATAGACATCGGTTAAAAATGTCAAAGTCGCT
GACAGTCTACTAAGTTACACGGAACAGTATTTAGAATACGACCCGTTTCTTTGCCACCTGACCCCTTCTA
ACCCATGGCTGTCCGATGACACCACTTTCTGGGAATTGAGGCAAGCAAGAACCGAGCCAGCAGAGGGT
AAAACGATGGGGTTTTGGCATGGACGAGGCAATTGAAAGACCCAGTTGGGAGAGAACAGTTCTCTAAATTT
CTAGAGTCAGAATTCAGCTCGGAAAAATTAAGATTCTGGCTGGCAGTGGAGGACCTGAAAAAGAGGCCTA
TTAAAGAAGTACCCTCAAGAGTTCAAGAAATATGGCAAGAGTTTCTGGCTCCCGAGGCCCCAGTGCTAT
TAACCTGGATTCCAAGAGTTATGACAAAACACACATAACGTGAAGGAACCTGGACGATACACATTTGAA
GATGCTCAGGAGCACATTTACAACTGATGAAAAGTGATTCATACCCACGTTTATAAGATCCAGTGCCT
ATCAGGAGCTTCTACAGGCAAGAAAAAGTCTGGAACTCAATGGATCGCAGAACATCTTTTGAAAAATT
TGCACAGAATGTGGGAAATCTCTACGTCCAAGAGGTTAAACAGCCTTGCTCAGTCTTAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



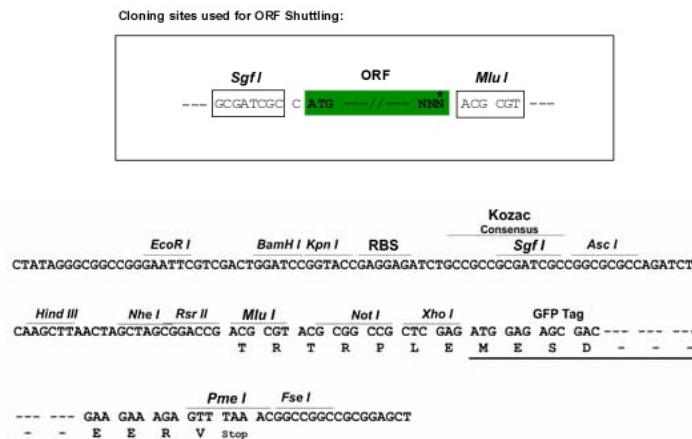
Protein Sequence: >RG205284 representing NM_002924
Red=Cloning site Green=Tags(s)

MAQGNNGYQTSNGVADESPNMLVYRKMEDVIARMQDEKNGIPIRTVKSFLSKIPSVFSGSDIVQWLKLNLTIEDPVEALHLGLMAAHGYFFPISDHVLTLDKDDGTFYRFQTPYFWSNCWEPENTDYAVYLCRMTQNKARLELADYEAESLARLQRAFARKWEFIFMQAEAQAKVDKKRDKIERKILDSQERAFWDVHRPVPVCVNTTEVDIKKSSMRNPHKTRKSVYGLQNDIRSHSPHTPTPETKPPTDELQQQIKYWQIQIDRHLKMSKVA
DSLLSYTEQYLEYDPFLLPDPSPNWLSDDTTFWELEASKEPSQQRVKRWGFGMDEALKDPVGREQFLKFL
LESEFSSENLRFWLAVEDLKKRPIKEVPSRVQEIWQEFAPGAPSAINLDSKSYDKTTHNVKEPGRYTFE
DAQEHIYKLMKSDSYPRFIRSSAYQELLQAKKSGNSMDRRTSFEKFAQNVGKSLTSKRLTSLAQSY

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002924

ORF Size: 1461 bp

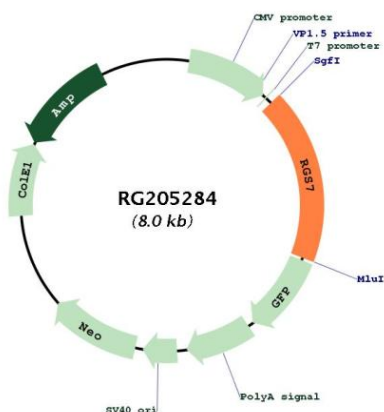
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_002924.3</u>
RefSeq Size:	2408 bp
RefSeq ORF:	1464 bp
Locus ID:	6000
UniProt ID:	<u>P49802</u>
Cytogenetics:	1q23.1
Domains:	RGS, DEP, G-gamma
Protein Families:	Druggable Genome
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 (PubMed:10521509, PubMed:10862767). The RGS7/GNB5 dimer enhances GNAO1 GTPase activity (PubMed:10521509). May play a role in synaptic vesicle exocytosis (PubMed:12659861). Modulates the activity of potassium channels that are activated by GNAO1 in response to muscarinic acetylcholine receptor M2/CHRM2 signaling (PubMed:15897264).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG205284