

## Product datasheet for **RG215382**

### **RASGRF1 (NM\_153815) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RASGRF1 (NM_153815) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RASGRF1
Synonyms:	CDC25; CDC25L; GNRP; GRF1; GRF55; H-GRF55; PP13187; ras-GRF1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG215382 representing NM\_153815  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTACTCGGCCATGTCACCCTTCAGCAAGGCCACGCTGGACACCAGCAAGCTCTATGTGTCCAGCAGCT  
 TCACCAACAAGATTCCAGATGAGGGCGATACGACCCTGAGAAGCCCGAAGACCCTTCAGCGCTCAGCAA  
 GCAGAGCTCAGAAGTCTCCATGAGAGAGGAGTCAGATATTGATCAAAAACAGAGTGATGATGGTGATACT  
 GAAACATACCAACTAAATCTCCAACAACCCAAATCAGTCAAAAAACAAAATCTTCAGAGTTCCAC  
 TCTTTTCTATAACAATGGAGTCGTATGACCTCCTGTCGTGAAGTGGACAATAACCGCAGTGCCTTGTC  
 GGCCGCTCTGCCTTTGCCATAGCAACCGCCGGGGCCAACGAGGGCACCCAAACAAGGAGAAGTACCGG  
 AGGATGTCCTTAGCCAGTGCAGGGTTTCCCCAGACCAGAGGAATGGAGACAAGGAGTTTGTGATCCGCA  
 GAGCAGCCACCAATCGTGTCTTGAACGTGCTCCGCCACTGGGTGTCCAAGCACTCTCAGGACTTTGAGAC  
 CAACGATGAGCTCAAATGCAAGGTGATCGGCTTCTGGAAGAAGTCATGCACGACCCGGAGCTCCTGACC  
 CAGGAGCGGAAGGCTGCAGCCAACATCATCAGGACTCTGACCCAGGAGGCCAGGTGACAACAGATCA  
 CGCTGGAGGAGATCACGCAGATGGCTGAAGGCGTGAAGGCTGAGCCCTTTGAAAACCACTCAGCCCTGGA  
 GATCGCGGAGCAGCTGACCCTGCTAGATCACCTCGTCTTCAAGAAGATTCCTTATGAGGAGTTCTTCGGA  
 CAAGGATGGATGAAACTGGAAAAGAAATGAAAGGACCCCTTATATCATGAAAACCACTAAGCACTTCAATG  
 ACATCAGTAACTTGATTGCTTCAGAAATCATCCGCAATGAGGACATCAACGCCAGGGTGAGCGCCATCGA  
 GAAGTGGTGGCCGTAGCTGACATATGCCGCTGCCTCCACAACACAATGCCGACTGGAGATCACCTCG  
 TCCATGAACCGCAGTGAATCTTCCGGCTCAAAAAGACGTGGCTCAAAGTCTCTAAGCAGACTAAAGCTT  
 TGATTGATAAGCTCCAAAAGCTTGTGTCATCTGAGGGCAGATTTAAGAATCTCAGAGAAGCTTGAAAA  
 TTGTGACCCACCCTGTGCCCTTACCTGGGGATGTACCTCACCAGCTGGCCTTCATCGAGGAGGGGACG  
 CCCAATTACACGGAAGACGGCCTGGTCAACTTCTCCAAGATGAGGATGATATCCCATATTATCCGAGAGA  
 TTCGCCAGTTTCAACAACTGCCTACAAAATAGAGCACCAAGCAAGGTAACGCAATATTTACTGGACCA  
 ATCTTTTGTAAATGGATGAAGAAAGCCTCTACGAGTCTTCTCTCGAATAGAACCAAAAACCTCCCCACC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG215382 representing NM\_153815  
 Red=Cloning site Green=Tags(s)

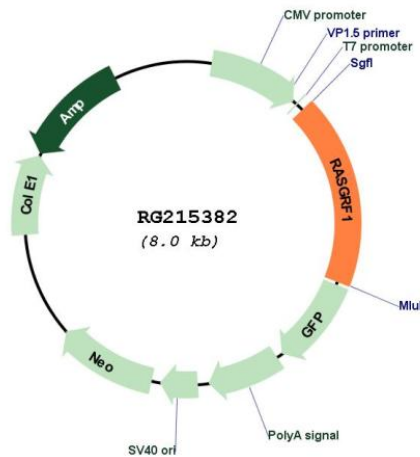
MYSAMSPFSKATLDTSKLYVSSSFTNKIPDEGDTTPEKPEDPSALSKQSSEVSMREESDIDQNSDDGDT  
 ETSPTKSPTTPKSVKNKNSSEFPLFSYNNGVVMTSCRELDNRSALSAASAFIAIATAGANEGTPNKEKYR  
 RMSLASAGFPDQRNGDKEFVIRRAATNRVNLNLRHWVSKHSQDFETNDELKCKVIGFLEEVMHDPELLT  
 QERKAAANIIRTLTQEDPGDNQITLEEITQMAEGVKAEPFENHSALEIAEQLTLLDHLVFKKIPYEEFFG  
 QGWMKLEKNERTPYIMKTTKHFNDISNLIASEIIRNEDINARVSAIEKWAVADICRCLHNYNAVLEITS  
 SMNRSIAIFRLKKTWLVKSKQTKALIDKLQKLVSEGRFKNLREALKNCDPPCVPLYGMYLTDLAFIEEGT  
 PNYTEDGLVNFSKMRMISHIIREIRQFQQTAYKIEHQAKVTQYLLDQSFVMDDEESLYESSLRIEPKLPT

**TR**TRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

**Plasmid Map:**


**ACCN:** NM\_153815

**ORF Size:** 1467 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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_153815.2</a> , <a href="#">NP_722522.1</a>
<b>RefSeq Size:</b>	2843 bp
<b>RefSeq ORF:</b>	1470 bp
<b>Locus ID:</b>	5923
<b>UniProt ID:</b>	<a href="#">Q13972</a>
<b>Cytogenetics:</b>	15q25.1
<b>Domains:</b>	RasGEF
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Focal adhesion, MAPK signaling pathway
<b>Gene Summary:</b>	<p>The protein encoded by this gene is a guanine nucleotide exchange factor (GEF) similar to the <i>Saccharomyces cerevisiae</i> CDC25 gene product. Functional analysis has demonstrated that this protein stimulates the dissociation of GDP from RAS protein. The studies of the similar gene in mouse suggested that the Ras-GEF activity of this protein in brain can be activated by Ca<sup>2+</sup> influx, muscarinic receptors, and G protein beta-gamma subunit. Mouse studies also indicated that the Ras-GEF signaling pathway mediated by this protein may be important for long-term memory. Alternatively spliced transcript variants encoding distinct isoforms have been reported. [provided by RefSeq, Mar 2009]</p>