

## Product datasheet for **RG217525**

### **RASGRP2 (NM\_153819) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RASGRP2 (NM_153819) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RASGRP2
Synonyms:	CALDAG-GEFI; CDC25L
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG217525 representing NM\_153819  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCAGGCACCCTGGACCTGGACAAGGGCTGCACGGTGGAGGAGCTGCTCCGCGGTGCATCGAAGCCT  
 TCGATGACTCCGGGAAGGTGCGGGACCCGAGCTGGTGCATGTTCTCATGATGCACCCTGGTACAT  
 CCCCTCCTCTCAGCTGGCGGCCAAGCTGCTCCACATCTACCAACAATCCCGGAAGGACAACCTCAATTCC  
 CTGCAGGTGAAAACGTGCCACCTGGTACGACTGGATCTCCGCCTCCAGCGGAGTTTGACTTGAACC  
 CGGAGTTGGCTGAGCAGATCAAGGAGCTGAAGGCTCTGCTAGACCAAGAAGGGAACCGACGGCACAGCAG  
 CCTAATCGACATAGACAGCGTCCCTACCTACAAGTGAAGCGGCAGGTGACTCAGCGGAACCTGTGGGA  
 CAGAAAAAGCGCAAGATGTCCTGTTGTTGACCACCTGGAGCCATGGAGCTGGCGGAGCATCTCACCT  
 ACTTGGAGTATCGCTCCTTCTGCAAGATCTGTTTCAGGACTATCACAGTTTCGTGACTCATGGTCGAC  
 TGTGGACAACCCCGTCTGGAGCGGTTTCATCTCCCTTCAACAGCGTCTCACAGTGGTGCAGCTCATG  
 ATCCTCAGCAAACCCACAGCCCCGAGCGGGCCCTGGTATCACACACTTGTCCAGTGGCGGAGAAGC  
 TGCTACAGCTGCAGAACTCAACACGCTGATGGCAGTGGTCCGGGGCCTGAGCCACAGCTCCATCTCCCG  
 CCTCAAGGAGACCCACAGCCACGTTAGCCCTGAGACCATCAAGCTCTGGGAGGGTCTCACGGAACAGTG  
 ACGGCGACAGGCAACTATGGCAACTACCGCGTCCGGTGGCAGCCTGTGTGGGCTCCGCTTCCCGATCC  
 TGGGTGTGCACCTCAAGGACCTGGTGGCCCTGCAGCTGGCACTGCCTGACTGGTGGACCCAGCCCGGAC  
 CCGGCTCAACGGGGCCAAGATGAAGCAGCTCTTAGCATCCTGGAGGAGCTGGCCATGGTGACCAGCCTG  
 CGGCCACAGTACAGGCCAACCCGACCTGCTGAGCCTGCTCACGGTGTCTTGGATCAGTATCAGACGG  
 AGGATGAGCTGTACCAGCTGTCCCTGCAGCGGGAGCCGCTCCAAGTCTCGCCAACCCAGCCCGGACGAG  
 TTGCACCCACCCACCCCGCCCGGTAAGTGGAGGAGTGGACCTCGGCTGCCAAACCCAAGCTGGATCAG  
 GCCCTCGTGGTGGAGCACATCGAGAAGATGGTGGAGTCTGTGTTCCGGAACCTTGACGTCGATGGGGATG  
 GCCACATCTCACAGGAAGAATCCAGATCATCCGTGGGAACCTTCCCTTACCTCAGCGCCTTTGGGGACCT  
 CGACCAGAACCAGGATGGCTGCATCAGCAGGGAGGAGATGGTTTCTATTTCTGCGCTCCAGCTCTGTG  
 TTGGGGGGCGCATGGGCTTCGTACACAACTCCAGGAGAGCAACTCCTTGCGCCCGTCCGCTGCCGCC  
 ACTGCAAAGCCCTGATCCTGGGCATCTACAAGCAGGGCCTCAAATGCCGAGCCTGTGGAGTGAAGTGCCA  
 CAAGCAGTGAAGGATCGCTGTGAGTTGAGTGTGGCGCAGGGCCAGAGTGTGAGCCTGGAGGGGTCT  
 GCACCCTCACCTCACCCATGCACAGCCACCATCACCGCCCTTACGCTTCTCTGCCCGCCCTGGCA  
 GCGGAGGCTCCAGGCCTCCAGAGATCCGTGAGGAGGAGGTACAGACGGTGGAGGATGGGGTGTTCAT  
 CCACTT

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG217525 representing NM\_153819  
 Red=Cloning site Green=Tags(s)

MAGTLDLDKGCTVEELLRGCIEAFDDSGKVRDPQLVRFMMHPWYIPSSQLAAKLLHHYQQSRKDNSNS  
 LQVKTCHLVRYWISAFPAEFDLNPFLAEQIKELKALLDQEGNRRHSSLIDIDSVPTYKWKRVTRQNPVG  
 QKKRKMILLFDHLEPMELAEHLTYLEYRSFKILFQDYHSFVTHGCTVDNPLERFISLFNSVSQWVQLM  
 ILSKPTAPQRALVITHFVHVAEKLLQLQNFNTLMAVVGGLSHSSIIRLKEHSHVSPETIKLWEGLTEL  
 TATGNYGNRRRLAACVGFRRPILGVHLKDLVALQLALPDWLDPARTRLNGAKMKQLFSILEELAMVTS  
 RPPVQANPDLLSLLTVSLDQYQTEDELQYLSLQREPRSSSPTSPCTPPRPPVLEEWTSAAKPKLDQ  
 ALVVEHIEKMSVFRNFDVDGDGHISQEEFQIRGNFPYLSAFGDLQDQDGCISREEMVSYFLRSSSV  
 LGGRMGFVHNFQESNSLRPVACRHKALILGIYKQLKCRACGVNCHKQCKDRLSVECRRAQSVSLEGS  
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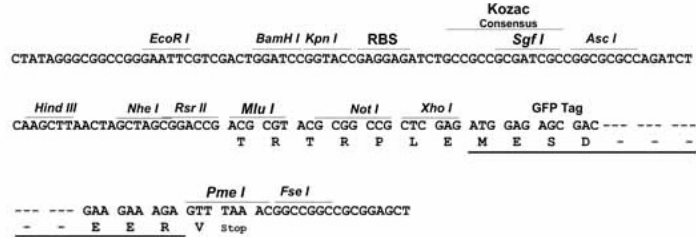
**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

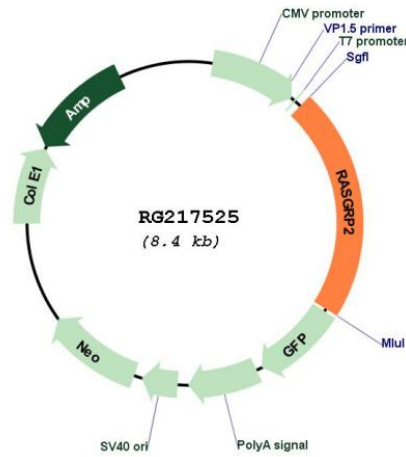
SgfI-MluI

### Cloning Scheme:

Cloning sites used for ORF Shuttling:



### Plasmid Map:



ACCN: NM\_153819  
 ORF Size: 1827 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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_153819.1</a> , <a href="#">NP_722541.1</a>
<b>RefSeq Size:</b>	2310 bp
<b>RefSeq ORF:</b>	1830 bp
<b>Locus ID:</b>	10235
<b>UniProt ID:</b>	<a href="#">Q7LDG7</a>
<b>Cytogenetics:</b>	11q13.1
<b>Domains:</b>	RasGEFN, RasGEF, EFh, DAG_PE-bind
<b>Protein Pathways:</b>	Chemokine signaling pathway, MAPK signaling pathway
<b>Gene Summary:</b>	The protein encoded by this gene is a brain-enriched nucleotide exchanged factor that contains an N-terminal GEF domain, 2 tandem repeats of EF-hand calcium-binding motifs, and a C-terminal diacylglycerol/phorbol ester-binding domain. This protein can activate small GTPases, including RAS and RAP1/RAS3. The nucleotide exchange activity of this protein can be stimulated by calcium and diacylglycerol. Four alternatively spliced transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Jan 2016]