

## Product datasheet for **RG214699**

### **RASA1 (NM\_022650) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RASA1 (NM_022650) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RASA1
Synonyms:	CM-AVM; CMAVM; CMAVM1; GAP; p120; p120GAP; p120RASGAP; PKWS; RASA; RASGAP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RG214699 representing NM\_022650  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAAGGGGTGGTATCACGAAAACTTGACAGAACGATAGCAGAAGAACGCCTCAGCGAGCCAGGGAAGT  
 CTGGCAGTTATCTTATAAGAGAGAGTATCGGAGGCCAGGGTCCTTTGACTTTTCTTTAGCCAGAT  
 GAATGTTGTCAACCATTTTAGGATTATTGCTATGTGTGGAGATTACTACATTGGTGGAAAGACGTTTTCT  
 TCACTGTCAGACCTAATAGGTTATTACAGTCATGTTTCTGTTTGCTTAAAGGAGAAAAATTACTTTACC  
 CAGTTGCACCACCAGAGCCAGTAGAAGATAGAAGGCGTGTACGAGCTATTCTACCTTACACAAAAGTACC  
 AGACACTGATGAAATAAGTTTCTTAAAAGGAGATATGTTCAATTGTTTATAATGAATTAGAAGATGGATGG  
 ATGTGGGTTACAAATTTAAGAACAGATGAACAAGGCCTATTGTTGAAGACCTAGTAGAAGAGGTGGGCC  
 GGGAGAAGATCCACATGAAGGAAAAATATGGTCCATGGGAAGATTTCAAACAGGAAGCTTATAATTT  
 ACTAATGACAGTTGGTCAAGTCTGCAGTTTTCTGTGAGGCCCTCAGATAAATACTCTGGCGATTATTCA  
 CTTTATTTCCGGACCAATGAAAAATATTCAGCGATTTAAAAATATGTCCAACGCCAAACAATCAGTTTATGA  
 TGGGAGGCCGGTATTATAACAGCATTGGGGACATCATAGATCACTATCGAAAAGAACAGATTGTTGAAGG  
 ATATTATCTTAAGGAACCTGTACCAATGCAGGATCAAGAACAAGTACTCAATGACACAGTGGATGGCAAG  
 GAAATCTATAATACCATCCGTCGTAACCAAAAGGATGCCTTTTATAAAAAATTGTTAAGAAAGGTTATC  
 TTCTGAAAAAGGGCAAAGGAAAACGTTGGAAAAATTTATATTTTATCTTAGAGGGTAGTGATGCCAACT  
 TATTTATTTTGAAGCGAAAAACGAGCTACCAACCAAAAGGATTAATAGATCTCAGTGTATGTTCTGTC  
 TATGTCGTTTATGATAGTCTCTTTGGCAGGCCAACTGTTTTAGATAGTAGTTCAGCACTTTAGTGAAG  
 AACATTACATCTTTACTTTGCAGGAGAACTCCAGAACAAGCAGAGGATTGGATGAAAGGTCAGCAGC  
 ATTTTGAATTTACGGAAGTAGTCCAGGGACATCCAATAAACGCCTTGTGTCAGGTGAGCAGCCTTGT  
 TTACATATTGAAGAAGCCATAAACTCCAGTAAAACATTTTACTAATCCATATTGTAACATCTACCTGA  
 ATAGTGTCCAAGTAGCAAAAACCTCATGCAAGGGGAAAGGCAAAACCCAGTATGGTCAGAAGAGTTTGTCTT  
 TGATGATCTTCTCCTGACATCAATAGATTTGAAATAACTCTTAGTAATAAAAAAAGAAAGCAAAAGAT  
 CCTGATATCTTATTTATGCGCTGCCAGTTGAGCCGATTACAGAAAGGGCATGCCACAGATGAATGGTTTC  
 TGCTCAGTCCCATATACCATAAAAGGTATTGAACCAGGGTCCCTGCGTGTTCGAGCAGATACTCTAT  
 GAAAAAATCATGCCAGAAGAAGAGTACAGTGAATTTAAAGAGCTTATACTGCAAAAGGAACTTCATGTA  
 GTCTATGCTTTATCACATGTATGTGGACAAGACCGAACACTACTGGCCAGCATCCTACTGAGGATTTTTC  
 TTCACGAAAAGCTTGAATCGTTGTTGTTATGCACACTAAATGACAGAGAAATAAGCATGGAAGATGAAGC  
 CACTACCCTATTTTCGAGCCACAACACTTGAAGCCTTGATGGAGCAGTATATGAAAGCCACTGCTACA  
 CAGTTTGTTCATCATGCTTTGAAAGACTCTATTTTAAAGATAATGGAAAGCAAGCAGTCTTGTGAGTTAA  
 GTCCATCAAAGTTAGAAAAAATGAAGATGTGAACACTAATTTAACACACCTATTGAACATACTTTCAGA  
 GCTTGTGGAGAAAATATTCATGGCTTCAGAAATACTTCCACCGACATTGAGATATATTTATGGGTGTTTA  
 CAGAAATCTGTTGAGCATAAGTGGCCTACAAATACCACCATGAGAACAAGAGTTGTTAGTGGTTTTGTT  
 TTCTTCGACTCATCTGCTGCCATCCTGAATCCACGGATGTTCAATATCATCTCAGATTCTCCATCTCC  
 TATTGCTGCAAGAACAACACTGATATTAGTGGCTAAATCTGTGCAGAACTTAGCAAATCTTGTGGAATTTGGA  
 GCTAAGGAGCCCTACATGGAAGGTGCAATCCATTTCATCAAAGCAACAACATCGTATGATCATGTTTT  
 TAGATGAACTTGGGAATGTACCTGAACTCCGGACACTACAGAGCATTCTAGAACGGACCTGTCCCGTGA  
 TTTAGCAGCATTGCATGAGATTTGCGTGGCTCATTGAGTGAACCTCGAACGCTCAGTAATGAGCGTGGT  
 GCACAGCAGCAGTATTGAAAAAGCTTCTGGCTATAACAGAACTGCTTCAACAAAAACAAAACAGTATA  
 CAAAAACCAATGATGTCAGG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG214699 representing NM\_022650  
 Red=Cloning site Green=Tags(s)

MKGWYHGKLDRTIAEERLRQAGKSGSYL IRESDRRPGSFVLSFLSQMNVNHFRIIAMCGDYYIGRRFS  
 SLSDLIGYYSHVSCLLKGEKLLYPVAPPEPVEDRRRVRAILPYTKVPDTEISFLKGMDFIVHNELEDGW  
 MWVTNLRTEQGLIVEDLVEEVGREEDPHEGKIWFHGKISKQEAYNLLMTVGQVCSFLVRPNDTPGDYS  
 LYFRTNENIQRFKICPTPNNQFMMGGRYNSIGDIIIDHYRKEQIVEGYLKEPVPMDQEQVLDNDTVDGK  
 EIYNTIRRKTDAFYKNIIVKKGYLLKKGKGRWKNLYF ILEGSDAQLIYFESEKRATKPKGLIDL SVCSV  
 YVHDSLFGRPNCQIVVQHFSEEHYIFYFAGETPEQAEDWMKGLQAFCNLRKSSPGTSNKRLRQVSSLV  
 LHIEEAHKLPVKHFTNPYCNILNSVQVAKTHAREGQNPVWSEEFVFDLPPDINRFEITLSNKTTKSKD  
 PDILFMRQLSRLQKGHATDEWFLSSHIPKGIPEGSLRVRARYSMEKIMPEEEYSEFKELILQKELHV  
 VYALSHVCGQDRTLLASILLRIFLHEKLESLLLCTLNDREISMEDEATTLFRATTLASTLMEQYMKATAT  
 QFVHALKDSILKIMESKQSCELSPSKLEKNEDVNTNLTHLLNILSELVEKIFMASEILPPTLRYIYGCL  
 QKSVQHKWPTNTTMRTRVVSQVFLRLICPAILNPRMFNIISDSPSPIAARTLILVAKSVQNLANLVEFG  
 AKPEPYMEGVNPFIKSNKHRMIMFLDELGNVPELPDTTEHSRTDL SRDLAALHEICVAHSDELRTLSNERG  
 AQQHVLLKLLAITELLQKQKQNYTKTNDVR

TRTRPLE - GFP Tag - V

**Restriction Sites:**

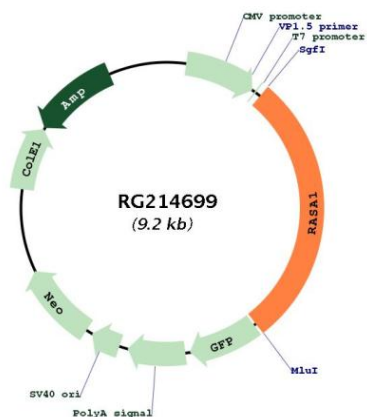
Sgfl-MluI

**Cloning Scheme:**



<b>ACCN:</b>	NM_022650
<b>ORF Size:</b>	2610 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_022650.3</a>
<b>RefSeq Size:</b>	3796 bp
<b>RefSeq ORF:</b>	2613 bp
<b>Locus ID:</b>	5921
<b>UniProt ID:</b>	<a href="#">P20936</a>
<b>Cytogenetics:</b>	5q14.3
<b>Domains:</b>	C2, SH2, SH3, PH, RasGAP, VPS9
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Axon guidance, MAPK signaling pathway
<b>Gene Summary:</b>	<p>The protein encoded by this gene is located in the cytoplasm and is part of the GAP1 family of GTPase-activating proteins. The gene product stimulates the GTPase activity of normal RAS p21 but not its oncogenic counterpart. Acting as a suppressor of RAS function, the protein enhances the weak intrinsic GTPase activity of RAS proteins resulting in the inactive GDP-bound form of RAS, thereby allowing control of cellular proliferation and differentiation. Mutations leading to changes in the binding sites of either protein are associated with basal cell carcinomas. Mutations also have been associated with hereditary capillary malformations (CM) with or without arteriovenous malformations (AVM) and Parkes Weber syndrome. Alternative splicing results in two isoforms where the shorter isoform, lacking the N-terminal hydrophobic region but retaining the same activity, appears to be abundantly expressed in placental but not adult tissues. [provided by RefSeq, May 2012]</p>

Product images:



Circular map for RG214699