

Product datasheet for **RG229432**

SynGAP (SYNGAP1) (NM_006772) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SynGAP (SYNGAP1) (NM_006772) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SynGAP
Synonyms:	MRD5; RASA1; RASA5; SYNGAP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG229432 representing NM_006772 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGCAGGTCTCGAGCCTCCATCCATCGGGGAGCATCCCCGCGATGTCCTATGCCCCCTCAGAGATG
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ACTAAAGCCATAGAAGAGTATATGAGACTGATTGGTCAGAAATACCTCAAGGATGCCATTGGAGAATTCA
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ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

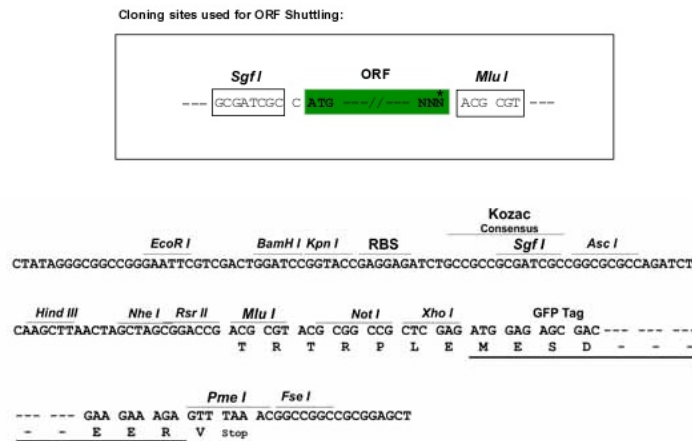
Protein Sequence: >RG229432 representing NM_006772
 Red=Cloning site Green=Tags(s)

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 SIIGRMLVEEELRRDHPAMAELPEPKRLLDAQERQLPPLGPTNPRVTLAPPWNLAPPAPPPPPRLQ
 ITENGEFRNTADH

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_006772

ORF Size: 4029 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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.

RefSeq: [NM_006772.3](#)

RefSeq Size: 6011 bp

RefSeq ORF: 4032 bp

Locus ID: 8831

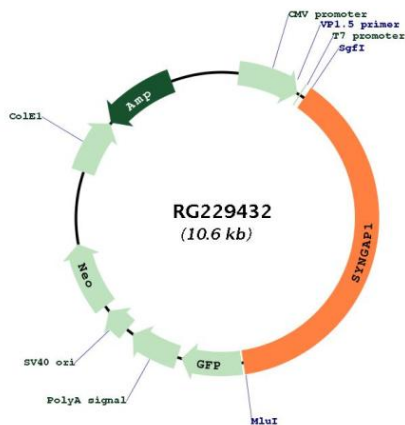
UniProt ID: [Q96PV0](#)

Cytogenetics: 6p21.32

Protein Families: Druggable Genome

Gene Summary:

This gene encodes a Ras GTPase activating protein that is a member of the N-methyl-D-aspartate receptor complex. The N-terminal domain of the protein contains a Ras-GAP domain, a pleckstrin homology domain, and a C2 domain that may be involved in binding of calcium and phospholipids. The C-terminal domain consists of a ten histidine repeat region, serine and tyrosine phosphorylation sites, and a T/SXV motif required for postsynaptic scaffold protein interaction. The encoded protein negatively regulates Ras, Rap and alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid receptor trafficking to the postsynaptic membrane to regulate synaptic plasticity and neuronal homeostasis. Allelic variants of this gene are associated with intellectual disability and autism spectrum disorder. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2016]

Product images:

Circular map for RG229432