

Product datasheet for **RG211650**

Septin 2 (SEPT2) (NM_001008492) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Septin 2 (SEPT2) (NM_001008492) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: SEPTIN2
Synonyms: DIFF6; hNedd5; NEDD-5; NEDD5; Pnutl3; SEPT2
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG211650 representing NM_001008492
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**

ATGTCTAAGCAACAGCCAACCTCAGTTTATAAATCCAGAAACACCTGGCTATGTTGGATTTGCAAACCTCC
CCAATCAAGTTCACCGAAAATCAGTGAAAAAGGTTTTGAGTTCACACTGATGGTGGTCCGGTGAATCAGG
TCTAGGAAAATCGACTCTATAACAGCCTATTCCTAACTGATCTGTACCCAGAAAGAGTCATACCTGGA
GCAGCAGAAAAATTGAAAGAACTGTCCAGATTGAGGCTTCAACTGTTGAAATTGAAGAGCGAGGGGTCA
AGCTACGCCTGACAGTGGTAGATACCCCTGGCTATGGTGACGCTATCAACTGCAGAGATTGTTTTAAGAC
AATTATCTCTATATTGATGAGCAATTTGAGAGGTACCTGCATGACGAGAGCGGCTTGAACAGGCGGCAC
ATCATTGATAATAGGGTGCAATTGTTGCTTTACTTTATTTACCTTTTGGACATGGACTTAAAGCCCTTAG
ATGTGGCGTTTATGAAGCAATACACAACAAGGTGAATATTGTGCCTGTCATTGCAAAAGCTGACTCT
CACCTGAAGGAACGGGAGCGGCTGAAGAAAAGGATTCTGGATGAAATTGAAGAACATAACATCAAAATC
TATCACTTACCTGATGCAGAATCAGATGAAGATGAAGATTTTAAAGAGCAGACTAGACTTCTCAAGGCTA
GCATCCCATTCTGTGGTTGGATCCAATCAGTTGATTGAAGCCAAGGAAAGAAAGGTGAGAGGCCCGCT
CTACCCCTGGGGTGTGTGGAAGTGGAGAACCAGAGCACAATGACTTTCTGAAGCTGAGAACCATGCTC
ATCACCCACATGCAGATCTCCAGGAGGTGACCCAGGACCTTATTATGAAAACCTCCGTTCTGAGAGAC
TCAAGAGAGGCGCAGGAAAGTGGAGAATGAGGACATGAATAAAGACCAGATCTTGCTGGAAAAAGAAC
TGAGCTCCGCGCATGCAAGAGATGATTGCAAGGATGCAGGCGCAGATGCAGATGCAGATGCAGGCGGG
GATGGCGATGGCGGGCTCTCGGCACACGTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG211650 representing NM_001008492
 Red=Cloning site Green=Tags(s)

MSKQQPTQFINPETPGYVGFANLPNQVHRKSVKKGFEFTLMVVGESGLGKSTLINSFLTDLYPERVIPG
 AAEKIERTVQIEASTVEIEERGVLRLTVVDTPGYGDAINCRDCFKTIIISYIDEQFERYLHDESGLNRRH
 IIDNRVHCCFYFISPFHGLKPLDVAFMKAIHNKVNIVPVIKADTLTKERERLKKRILDEIEEHNKI
 YHLPDAESDEDEDFKEQTRLLKASIPFSVVGSNQLIEAKGKKVRGRLYPWGVVEVENPEHNDFLKLRMTL
 ITHMQDLQEVTDLHYENFRSERLKRGRKVENEDMNKDQILLEKEAELRRMQEMIARMQAQMOMQMGQ
 DGDGGALGHHV

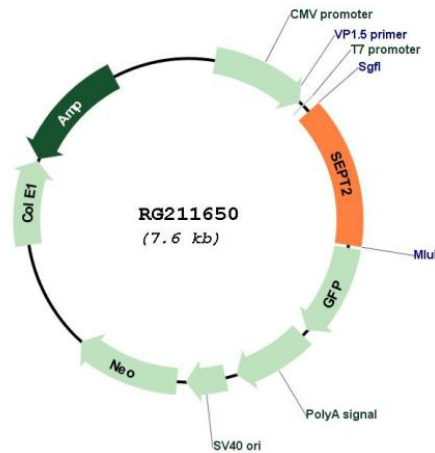
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001008492

ORF Size:	1083 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:	<ol style="list-style-type: none">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_001008492.2
RefSeq Size:	3396 bp
RefSeq ORF:	1086 bp
Locus ID:	4735
UniProt ID:	Q15019
Cytogenetics:	2q37.3
Gene Summary:	Filament-forming cytoskeletal GTPase. Forms a filamentous structure with SEPTIN12, SEPTIN6, SEPTIN2 and probably SEPTIN4 at the sperm annulus which is required for the structural integrity and motility of the sperm tail during postmeiotic differentiation (PubMed:25588830). Required for normal organization of the actin cytoskeleton. Plays a role in the biogenesis of polarized columnar-shaped epithelium by maintaining polyglutamylated microtubules, thus facilitating efficient vesicle transport, and by impeding MAP4 binding to tubulin. Required for the progression through mitosis. Forms a scaffold at the midplane of the mitotic spindle required to maintain CENPE localization at kinetochores and consequently chromosome congression. During anaphase, may be required for chromosome segregation and spindle elongation. Plays a role in ciliogenesis and collective cell movements. In cilia, required for the integrity of the diffusion barrier at the base of the primary cilium that prevents diffusion of transmembrane proteins between the cilia and plasma membranes: probably acts by regulating the assembly of the tectonic-like complex (also named B9 complex) by localizing TMEM231 protein. May play a role in the internalization of 2 intracellular microbial pathogens, <i>Listeria monocytogenes</i> and <i>Shigella flexneri</i> . [UniProtKB/Swiss-Prot Function]