

## Product datasheet for **RG237793**

### Septin 2 (SEPT2) (NM\_001282973) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Septin 2 (SEPT2) (NM_001282973) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Septin 2
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:	>RG237793 representing NM_001282973. Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGTCTAAGCAACAGCCAACCTCAGTTTATAAATCCAGAAACACCTGGCTATGTTGGATTTGCAAACCTC
CCCAATCAAGTTCACCGAAAATCAGTGAAGAAAGGTTTGGAGTTCACACTGATGGTGGTGGTGAATCA
GGTCTAGGAAAATCGACTCTCATAAACAGCCTATTCCTAACTGATCTGTACCCAGAAAGAGTCATACCT
GGAGCAGCAGCTTTGAACACAAGGAAAACACTTTTATGGGAAAAAATTGAAAGAAGTGTCCAGATTGAG
GCTTCAACTGTTGAAATGAAGAGCGAGGGGTCAAGCTACGCCTGACAGTGGTAGATACCCCTGGCTAT
GGTGACGCTATCAACTGCAGAGATTGTTTTAAGACAATTATCTCCTATATTGATGAGCAATTTGAGAGG
TACCTGCATGACGAGAGCGGCTTGAACAGCGGCACATCATTGATAATAGGGTGCATTGTTGCTTTTAC
TTTATTTACCTTTTGGACATGGACTTAAGCCCTTAGATGTGGCGTTTATGAAGGCAATACACAACAAG
GTGAATATTGTGCTGTGCTTGCAAAAGCTGACACTCTCACCCCTGAAGGAACGGGAGCGGCTGAAGAAA
AGGATTCTGGATGAAATGAAGAACATAACATCAAATCTATCACTTACCTGATGCAGAATCAGATGAA
GATGAAGATTTTAAAGAGCAGACTAGACTTCTCAAGGCTAGCATCCCATCTCTGTGGTTGGATCCAAT
CAGTTGATTGAAGCCAAAGGAAAGAAGGTCAAGGCGCCCTCTACCCCTGGGGTGTGTGGAAGTGGAG
AACCCAGAGCACAAATGACTTTCTGAAGCTGAGAACCATGCTCATCACCCATGCAGGATCTCCAGGAG
GTGACCCAGGACCTTCATTATGAAAACCTCCGTTCTGAGAGACTCAAGAGAGGCGGAGGAAAGTGGAG
AATGAGGACATGAATAAAGACCAGATCTTGCTGGAAGAAAGAGCTGAGCTCCGCCGATGCAAGAGATG
ATTGCAAGGATGCAGGCGCAGATGCAGATGCAGATGCAGGCGGGGATGGCGATGGCGGGGCTCTCGGG
CACCACGTG
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



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**Protein Sequence:** >Peptide sequence encoded by RG237793  
 Blue=ORF Red=Cloning site Green=Tag(s)

MSKQQPTQFINPETPGYVGFANLPNQVHRKSVKKGFEFTLMVVGESGLGKSTLINSFLTDLYPERVIP  
 GAAALNTRKTLLEKIERTVQIEASTVEIEERGVLRLTVVDTPGYGDAINCRDCFKTIISYIDEQFER  
 YLHDESGLNRRHIIDNRVHCCFYFISPFHGLKPLDVAFMKAIHNKVNI VPVIAKADTLTKERERLKK  
 RILDEIEEHNIKIYHLPDAE SDEDED FKEQTRLLKASIPF SVVGSNQL IEAKGKVRGRL YPWGVVEVE  
 NPEHNDFLKLRMLITHMQDLQEVTDLHYENFRSERLKRGRKVENEDMNKDQILLEKEAELRRMQEM  
 IARMQAQMOMQMGDDGGALGHHV  
 TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV  
 MGYGFYHFGTYPYSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED  
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001282973

**ORF Size:** 1113 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).

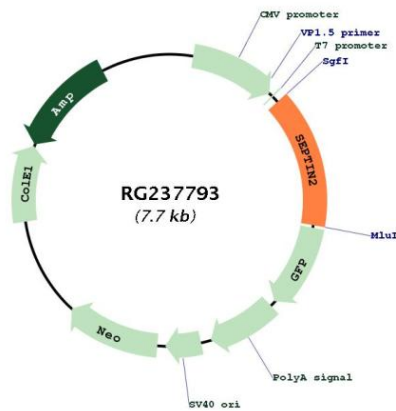
**RefSeq:** [NM\\_001282973.1](#), [NP\\_001269902.1](#)

**RefSeq Size:** 3681 bp

RefSeq ORF: 1116 bp  
 Locus ID: 4735  
 UniProt ID: [Q15019](#)  
 Cytogenetics: 2q37.3  
 MW: 43.1 kDa

**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, *Listeria monocytogenes* and *Shigella flexneri*. [UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for RG237793