

## Product datasheet for **RC204867**

### Septin 2 (SEPT2) (NM\_004404) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Septin 2 (SEPT2) (NM_004404) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Septin 2
Synonyms:	DIFF6; hNedd5; NEDD-5; NEDD5; Pnutl3; SEPT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204867 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTAAGCAACAGCCAACCTCAGTTTATAAAATCCAGAAACACCTGGCTATGTTGGATTTGCAAACCTCC  
CCAATCAAGTTCACCGAAAATCAGTGAAAAAGGTTTTGAGTTCACACTGATGGTGGTCCGGTGAATCAGG  
TCTAGGAAAATCGACTCTATAACAGCCTATTCCTAACTGATCTGTACCCAGAAAGAGTCATATCTGGA  
GCAGCAGAAAAAATTGAAAGAACTGTCCAGATTGAGGCTTCAACTGTTGAAATTGAAGAGCGAGGGGTCA  
AGCTACGCCTGACAGTGGTAGATACCCCTGGCTATGGTGACGCTATCAACTGCAGAGATTGTTTTAAGAC  
AATTATCTCTATATTGATGAGCAATTTGAGAGGTACCTGCATGACGAGAGCGGCTTGAACAGGCGGCAC  
ATCATTGATAATAGGGTGCAATTGTTGCTTTACTTTATTTACCTTTTGGACATGGACTTAAGCCCTTAG  
ATGTGGCGTTTATGAAGGCAATACACAACAAGGTGAATATTGTGCCTGTCATTGCAAAAGCTGACTCT  
CACCTGAAGGAACGGGAGCGGCTGAAGAAAAGGATTCTGGATGAAATTGAAGAACATAACATCAAAATC  
TATCACTTACCTGATGCAGAATCAGATGAAGATGAAGATTTTAAAGAGCAGACTAGACTTCTCAAGGCTA  
GCATCCCATTCTCTGTGGTTGGATCCAATCAGTTGATTGAAGCCAAGGAAAGAAAGGTGAGAGCCGCT  
CTACCCCTGGGGTGTGTGGAAGTGGAGAACCAGAGCACAATGACTTTCTGAAGCTGAGAACCATGCTC  
ATCACCCACATGCAGGATCTCCAGGAGGTGACCCAGGACCTTATTATGAAAACCTCCGTTCTGAGAGAC  
TCAAGAGAGGCGCAGGAAAGTGGAGAATGAGGACATGAATAAAGACCAGATCTTGCTGGAAAAAGAAC  
TGAGCTCCGCGCATGCAAGAGATGATTGCAAGGATGCAGGCGCAGATGCAGATGCAGATGCAGGCGGG  
GATGGCGATGGCGGGCTCTCGGCACACGTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTAA



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**Protein Sequence:** >RC204867 protein sequence  
Red=Cloning site Green=Tags(s)

MSKQQPTQFINPETPGYVGFANLPNQVHRKSVKKGFEFTLMVVGESGLGKSTLINSFLTDLYPERVISG  
 AAEKIERTVQIEASTVEIEERGVKLRLLTVVDTPGYGDAINCRDCFKTIIISYIDEQFERYLHDESGLNRRH  
 IIDNRVHCCFYFISPFHGHLKPLDVAFMKAIHNKVNIIVPIAKADTLTKERERLKKRILDEIEEHNIKI  
 YHLPDAESDEDEDFKEQTRLLKASIPFSVVGSNQLIEAKGKKVRGRLYPWGVVEVENPEHNDFLKLRTML  
 ITHMQDLQEVTDLHYENFRSERLKRGGKRVENEDMNKDQILLEKEAELRRMQEMIARMQAQMOMQGG  
 DGDGGALGHHV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6580\\_f11.zip](https://cdn.origene.com/chromatograms/mk6580_f11.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_004404

**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:**

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\\_004404.5](#)

**RefSeq Size:** 3323 bp

**RefSeq ORF:** 1086 bp

**Locus ID:** 4735

**UniProt ID:** [Q15019](#)

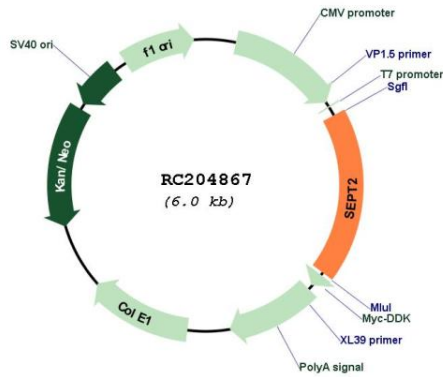
**Cytogenetics:** 2q37.3

**Domains:** GTP\_CDC

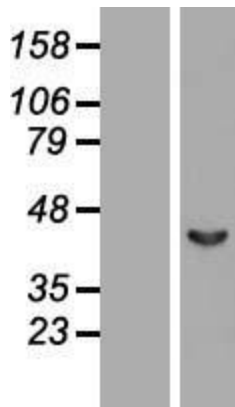
**MW:** 41.5 kDa

**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]

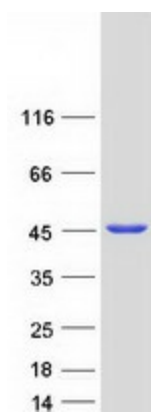
Product images:



Circular map for RC204867



Western blot validation of overexpression lysate (Cat# [LY423438]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC211650] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SEPTIN2 protein (Cat# [TP304867]). The protein was produced from HEK293T cells transfected with SEPTIN2 cDNA clone (Cat# RC204867) using MegaTran 2.0 (Cat# [TT210002]).