

Product datasheet for RC237957

Septin 2 (SEPT2) (NM_001282972) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Septin 2 (SEPT2) (NM_001282972) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SEPTIN2
Synonyms:	DIFF6; hNedd5; NEDD-5; NEDD5; Pnutl3; SEPT2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC237957 representing NM_001282972 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCGTGGATAAGCGAGGGGAGAGCGACTAGGCCCTGTCTGCGGGTACCTTCGGCAGGAGAGGGCGACG
AAGGTCTGCACCAGCGAGACGAAGCTTCACAAAAGATGTCTAAGCAACAGCCAACCTCAGTTTATAAATCC
AGAAACACCTGGCTATGTTGGATTTGCAAACCTCCCAATCAAGTTCACCGAAAAATCAGTAAAAAAGGT
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TAACTGATCTGTACCCAGAAAGAGTCATACCTGGAGCAGCAGAAAAAATTGAAAGAATGTCCAGATTGA
GGCTTCAACTGTTGAAATTGAAGAGCGAGGGGTCAAGCTACGCCTGACAGTGGTAGATACCCCTGGCTAT
GGTGACGCTATCAACTGCAGAGATTGTTTTAAGACAATTATCTCCTATATTGATGAGCAATTTGAGAGGT
ACCTGCATGACGAGAGCGGCTTGAACAGGCGGCACATCATTGATAATAGGGTGCATTGTTGCTTTACTT
TATTTACCTTTTGGACATGGACTTAAGCCCTTAGATGTGGCGTTTATGAAGGAATACACAACAAGGTG
AATATTGTGCCTGTCATTGCAAAAGCTGACACTCTCACCTGAAGGAACGGGAGCGGCTGAAGAAAAAGGA
TTCTGGATGAAATTGAAGAACATAACATCAAAATCTATCACTACCTGATGCAGAATCAGATGAAGATGA
AGATTTTAAAGACGAGACTAGACTTCTCAAGGCTAGCATCCATTCTCTGTGGTTGGATCCAATCAGTTG
ATTGAAGCCAAAGGAAAGAGGTGAGAGCCGCTCTACCCCTGGGGTGTGTGGAAGTGGAGAACCAG
AGCACAATGACTTTCTGAAGCTGAGAACCATGCTCATCACCACATGCAGGATCTCCAGGAGGTGACCCA
GGACCTTCATTATGAAAACCTCCGTTCTGAGAGACTCAAGAGAGGCGGCAGGAAAGTGGAGAATGAGGAC
ATGAATAAAGACCAGATCTTGCTGGAAAAAGAAGCTGAGCTCCGCCGATGCAAGAGATGATTGCAAGGA
TGCAGGCGCAGATGCAGATGCAGATGCAGGCGGGGATGGCGATGGCGGGGCTCTCGGCACCACGTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC237957 representing NM_001282972
 Red=Cloning site Green=Tags(s)

MPWISSEGRATRPCLRVPSARRGDEGLHQRDEASQKMSKQQPTQFINPETPGYVGFANLPNQVHRKSVKKG
 FEFTLMVVGESGLGKSTLINSFLTDLYPERVIPGAAEKIERTVQIEASTVEIEERGKLRLLTVVDTPGY
 GDAINCRDCFKTIISYIDEQFERYLHDESGLNRRHIIDNRVHCCFYFISPFHGHLKPLDVAFMKAIHNKV
 NIVPVIKADTLTKERERLKKRILDEIEEHNIKLYHLPAESEDDEDFKEQTRLLKASIPF SVVGSNQL
 IEAKGKVRGRLYPWGVVEVENPEHNDFLKRLTMLITHMQDLQEVTDLHYENFRSERLKRGRKVENED
 MNKDQILLEKEAELRRMQEMIARMQAQMOMQMGDDGGALGHHV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

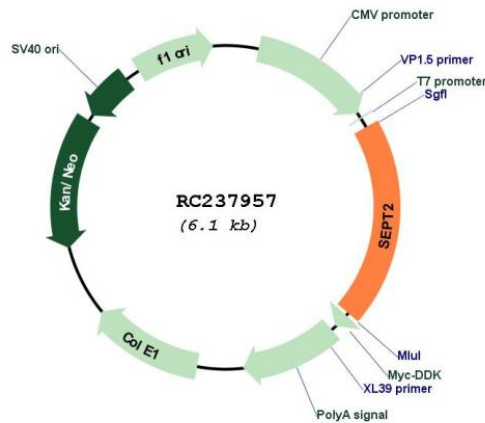
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001282972

ORF Size:	1188 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_001282972.1 , NP_001269901.1
RefSeq Size:	3457 bp
RefSeq ORF:	1191 bp
Locus ID:	4735
UniProt ID:	Q15019
Cytogenetics:	2q37.3
MW:	45.9 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]