

Product datasheet for SC335851

Septin 2 (SEPT2) (NM_001282972) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Septin 2 (SEPT2) (NM_001282972) Human Untagged Clone
Tag:	Tag Free
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)
Fully Sequenced ORF:	>SC335851 representing NM_001282972. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGCCGTGGATAAGCGAGGGGAGAGCGACTAGGCCCTGTCTGCGGGTACCTTCGGCGAGGAGAGGCGAC
GAAGGTCTGCACCAGCGAGACGAAGCTTCACAAAAGATGTCTAAGCAACAGCCAACCTCAGTTTATAAAT
CCGAAACACCTGGCTATGTTGGATTTGCAAACCTCCCAATCAAGTTCACCGAAAATCAGTGAAAAAA
GGTTTTGAGTTCACACTGATGGTGGTGGTGAATCAGGTCTAGGAAAATCGACTCTATAAACAGCCTA
TTCTAACTGATCTGTACCCAGAAAGAGTCATACCTGGAGCAGCAGAAAAAATTGAAAGAACTGTCCAG
ATTGAGGCTTCAACTGTTGAAATTGAAGAGCGAGGGGTCAAGCTACGCCCTGACAGTGGTAGATACCCT
GGCTATGGTGACGCTATCAACTGCAGAGATTGTTTTAAGACAATTATCTCTATATTGATGAGCAATTT
GAGAGGTACCTGCATGACGAGAGCGGCTTGAACAGGCGGCACATCATTGATAATAGGGTGCATTGTTGC
TTTTACTTTATTTACCTTTTGGACATGGACTTAAGCCCTTAGATGTGGCGTTTATGAAGGCAATACAC
AACAAAGGTGAATATTGTGCCTGTCTTGCAAAAGCTGACACTCTCACCCTGAAGGAACGGGAGCGGCTG
AAGAAAAGGATTCTGGATGAAATTGAAGAACATAACATCAAAATCTACTTACCTGATGCAGAATCA
GATGAAGATGAAGATTTAAAGAGCAGACTAGACTTCTCAAGGCTAGCATCCCATTCTGTGGTTGGA
TCCAATCAGTTGATTGAAGCCAAAGGAAAGAAGGTGAGAGGCGCCTCTACCCCTGGGGTGTGTGGAA
GTGGAGAACCAGAGCACAATGACTTTCTGAAGCTGAGAACCATGCTCATCACCACATGCAGGATCTC
CAGGAGGTGACCCAGGACCTTCAATATGAAAACCTCCGTTCTGAGAGACTCAAGAGAGGCGCAGGAAA
GTGGAGAATGAGGACATGAATAAAGACCAGATCTTGTGTAAGAAAGAGCTGAGCTCCGCCGCATGCAA
GAGATGATTGCAAGGATGCAGGCGCAGATGCAGATGCAGATGCAGGGCGGGGATGGCGATGGCGGGCT
CTCGGGCACCACGTGTA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
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Restriction Sites: SgfI-MluI



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ACCN:	NM_001282972
Insert Size:	1191 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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
RefSeq Size:	3457 bp
RefSeq ORF:	1191 bp
Locus ID:	4735
UniProt ID:	Q15019
Cytogenetics:	2q37.3
MW:	45.5 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]

Transcript Variant: This variant (5) differs in the 5' UTR and the 5' coding region, and initiates translation at an alternate start codon, compared to variant 1. The encoded isoform (b) has a longer and distinct N-terminus compared to isoform a.