

Product datasheet for SC117402

Septin 2 (SEPT2) (NM_004404) Human Untagged Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Septin 2 (SEPT2) (NM_004404) Human Untagged Clone |
| Tag: | Tag Free |
| Symbol: | Septin 2 |
| Synonyms: | DIFF6; hNedd5; NEDD-5; NEDD5; Pnutl3; SEPT2 |
| Mammalian Cell Selection: | None |
| Vector: | <u>pCMV6-XL5</u> |
| E. coli Selection: | Ampicillin (100 ug/mL) |
| Fully Sequenced ORF: | >OriGene ORF within SC117402 sequence for NM_004404 edited (data generated by NextGen Sequencing) |

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ATGTCTAAGCAACAGCCAACTCAGTTTATAAATCCAGAAACACCTGGCTATGTTGGATT
GCAAACCTCCCAATCAAGTTCACCGAAAATCAGTGAAAAAGGTTTTGAGTTCACACTG
ATGGTGGTCGGTGAATCAGGTCTAGGAAAATCGACTCTCATAAACAGCCTATTCCAACT
GATCTGTACCCAGAAAGAGTCATACCTGGAGCAGCAGAAAAAATTGAAAGAACTGTCAG
ATTGAGGCTTCAACTGTTGAAATTGAAGAGCGAGGGGTCAAGCTACGCCTGACAGTGGTA
GATACCCCTGGCTATGGTGACGCTATCAACTGCAGAGATTGTTTTAAGACAATTATCTCC
TATATTGATGAGCAATTTGAGAGGTACCTGCATGACGAGAGCGGCTTGAACAGGCGGCAC
ATCATTGATAATAGGGTGCATTGTTGCTTTTACTTTATTTACCTTTTGGACATGGACTT
AAGCCCTTAGATGTGGCGTTTATGAAGGAATACACAACAAGGTGAATATTGTGCCTGTC
ATTGCAAAGCTGACACTCTCACCTGAAGGAACGGGAGCGGCTGAAGAAAAGGATTCTG
GATGAAATTGAAGAACATAACATCAAAATCTATCACTTACCTGATGCAGAAATCAGATGAA
GATGAAGATTTTAAAGAGCAGACTAGACTTCTCAAGGCTAGCATCCCATTCTCTGTGGTT
GGATCCAATCAGTTGATTGAAGCCAAAGGAAAGAGGTGAGAGGCGCCTCTACCCCTGG
GGTGTGTGGAAGTGGAGAAGCCAGAGCACAATGACTTTCTGAAGCTGAGAACCATGCTC
ATCACCCACATGCAGGATCTCCAGGAGGTGACCCAGGACCTTCATTATGAAAACCTCCGT
TCTGAGAGACTCAAGAGAGGCGGCAGGAAAGTGGAGAATGAGGACATGAATAAAGACCAG
ATCTTGCTGAAAAAGAAGCTGAGCTCCGCCCATGCAAGAGATGATTGCAAGGATGCAG
GCGCAGATGCAGATGCAGATGCAGGGCGGGGATGGCGATGGCGGNCTCTCGGGCACAC
GTGTAA

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Clone variation with respect to NM_004404.3
1066 g=>n



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| 5' Read Nucleotide Sequence: | <p>>OriGene 5' read for NM_004404 unedited</p> <pre> CCCCCTGTTTCGCNATTTTCGGATCACGCACTGCACTATNAGGGCGCGCCGCGCAATTCCG GCACGAGGGGACAGGAGGAGAGGCGAAGGCTCCCCCTCCCCGTGATCGCTCCGCACTCCC GCCACCACCTGCCCTCCCGCGACCGCCTCTCTCCTCCTCAGTGGGCACTTGTCTCCTTCT AACAAACGGCCTTCCCCCACTCCAGTTACCCACCGCAAGGCGAAGATTCTCATTACCTG TTCCACTCTTATAAGCATAAGAAAACCGAGCTCATAAGACGAAGCTTCACAAAAGATGTC TAAGCAACAGCCAACCTCAGTTTATAAATCCAGAAACACCTGGCTATGTTGGATTTGCAAA CCTCCCCAATCAAGTTCACCGAAAATCAGTGAAAAAAGGTTTTGAGTTCACACTGATGGT GGTCGGTGAATCAGGTCTAGGAAAATCGACTCTCATAAACAGCCTATTCCCTAACTGATCT GTACCCAGAAAGAGTCATACCTGGAGCAGCAGAAAAAATTGAAAGAACTGTCCAGATTGA GGCTTCAACTGTTGAAATTGAAGAGCGAGGGGTCAAGCTACGCCTGACAGTGGTAGATAC CCCTGGCTATGGTGACGCTATCAACTGCAGAGATTGTTTTAAGACAATTATCTCCTATAT TGATGAGCAATTTGAGAGGTACCTGCATGACGAGAGCGGCTTGAACAGGGCGGCACATCAT TGATAATAGGGTGCATTGCTGCTTTTACTTTATTTACCTTTTTGGACATGGACTTAACC CCTTAGATGGGGGTTTTATGAAGCAATACACAACAAGGTGAATATTGTGCCTGTCATTG GCAAAGCTGACACTCTCACCTGNAAGGACCGGAACCGGCTGAAGAAAAGGA </pre> |
| 3' Read Nucleotide Sequence: | <p>>OriGene 3' read for NM_004404 unedited</p> <pre> AACATGTGCTTTATTGTAAGGTTAGTTTTAAATGGATACAAAATTGCTGTGTAATAAAG TGTTTTCAAATACATTTCTATAGGTAGAGACTATGTCTTAGTAAAAGAGCAGTTATCTA TTATCAAAAGTATCTATTTAGATTTGGGTAGTAAAACCAAGGGGATCAGAAGTGTAGCA GTGTGGGTCCCTCCCTCCCTGCATAGCTGTTACCAGGAGGCAGCGTGCCTGAAGTACTTTC ACTCACATATGCGGGGCTTAGTCACTAGCAAACCTGTTTTTCTTTTTTACAGATTTTCCA GCAAAGTTATTAATGTCAAACCTCAAATAATGGACTCCGCATGGATGTACTCTGAAGTCA TGGAACACCACCTTCTTAGCTACCTTACACAATAAGCCATAACATACAGCTTTTGGCTGT TCACAATTAAGCAACAGTGAAGGGCAAAGTTAGCACGAACACCAGATTATTTTCTGTAGC ACACCTTCATTAACTATTATTATTTAACTGCCTCATTTTATGTTTTTCTAGCCCCCACA CAAATGAAAAAACCTGTCTCATCTCAGATTAAGCATTTTCTCCATCTCCCTACACAAC CATTGTCTTCTTTCATCTGTCAATCCCTGGGGTTGAATTTCCCACTTTCAGTAGAATGA TAAAAAAGGCAACCGCTGGAGCGTACCCTAAGGAGACACCCGAAGAAAGGTGACACTAAG GCTACAGCGCACAGAAAACAGACCAGGTGTGGCTTCGACTGTGCGGACCTGCCACTAGC CTATGCTACAGATTTGAAATGTCTTTCACTCTGACATGCCCACTGTTTTTTTTACACAAC ATGAATGACACGCACTGGCTTANATAAATGACCCGCTGCCCCATAAGATGTGACTGCT CTTTTCTCCCCACAAATTACTCAAAGGGGTATTTAAAGAACCCCCACAGGGACACCGG TAGCTTCATAGTTAACGCACCAG </pre> |
| Restriction Sites: | NotI-NotI |
| ACCN: | NM_004404 |
| Insert Size: | 3570 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:

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_004404.3](#), [NP_004395.1](#)

RefSeq Size: 3311 bp

RefSeq ORF: 1086 bp

Locus ID: 4735

UniProt ID: [Q15019](#)

Cytogenetics: 2q37.3

Domains: GTP_CDC

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 (4) differs in the 5' UTR compared to variant 1. Variants 1-4, 8-13, and 16-18 encode the same isoform (a).