

Product datasheet for **RN203680**

Camsap2 (NM_001134503) Rat Untagged Clone

Product data:

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| Product Type: | Expression Plasmids |
| Product Name: | Camsap2 (NM_001134503) Rat Untagged Clone |
| Tag: | Tag Free |
| Symbol: | Camsap2 |
| Synonyms: | Camsap111; RGD1310950 |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Cell Selection: | Neomycin |
| Fully Sequenced ORF: | >RN203680 representing NM_001134503 Red=Cloning site Blue=ORF Orange=Stop codon |

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGGGGATGCTGCAGACCCGCGGGAGGTGAGAAGGACGTTTCATTGTTCCAGCCATCAAACCCCTTGACC
ACTATGACTTCTCCAGAGCCAAAATCGCCTGCAATCTGGCCTGGCTGGTGGCCAAAGCCTTTGGGACAGA
AACTGTGCCAGAGGAACCTCGAGAACCATTTACACAGATCAGTATGACCAGGAACACATCAAGCCCCT
GTCGTTAACCTGCTTCTGTGAGCGGAGCTGTACTGTCGTGCTGGCAGTCTCATCCCAAGAGTGACGCTG
CAAAGCCCCTCCTGGGCCACGATGCTGTAATCCAGGCATTAGCACACAAAAGGCCTGTATGTCACCTGACCA
GGAAAACTGGTAACTGAAAGAGACCTCCACAAGAAACCCATACAGATGAGTGCACACTTGGCCATGATC
GATACTCTAATGATGGCTTACACTGTAGAGATGGTCAGCATAGAGAAAGTAATTGCATGTGCTCAACAGT
ATTCAGCTTTTTTCAAGCCACAGATCTGCCCTATGATATCGAGGATGCTGTGACTGGATAAATAA
GGTAAATGAACACTTGAAAGACATAATGGAACAAGAACAATAAATCTAAAGAGCACCACACGGCTGAAGCT
CCAGGAGGTCAAAGTCTCCTTCCAAATGGTTTTGGAACTGGTCCAGCTCGTTACAGGAAGGAGCAAA
CACTGCTTAAGCAACTGCCTTGCAATCCATTGGTGGAAACTTGTGAAGGACGGCAGGATGGCTGTGC
GCTGGCTGCCCTCATTCACTTCTACTGCCCTGCTGTTGTCCGACTAGAAGATATTTGTTTGAAGAAACT
ATGCTTTTGGCCGACAGTCTGTATAACCTGCAGCTGATTAGGAATTTTGCCTAAGAACTTAAACCATT
GCTGCCATTTAGCTTGGAAAGATGCTTTATGCTGCTTCCGATCAAAAGAGTAATTATTTGGTGTTCAT
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GAATCATCCGCTCTGTTAGTAATGAGGGCTCAACAACAGTCGGGCATCAAACACATTAGGAAAAATCT
GTCCTTCAAGCCAGTGAATGGAGGAGAAGAGAAAGCATTGAAGAAGAACTTCATGTGACCCCTCATGGG
GACCTCAAATCTTACATGCCTCTCAGCACAAATGAACTGAACTCTAATGAGAATACTCACCACAAGCTCC



CAAACGGGGCTTTACAAAATAGAGTGCTTCTAGATGAGTTGGGAATCAGATTGAAACTCCGAGCATTGA
 AGAAGCATTACAGATAATCCATGATACTGAAAAACCTCCTCATACAGCGCGGCCAGATCAGATTGCTAAT
 GGCTTCTTTCTTACGGTCAGGATCTGAGTCTCCTGAATCAAATATCAAGCTAAGCCAGTCCAGTCCTG
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 CGTTCCCTCAGAAGACATTCCCAGAACCATGGACGAGGACTCTCCTTGAGAGATTACTGTTAGCTTA
 GACTCTGACATGGATGATGCGTCTAAATTTCTCAGGACTATGATATAAGAGCCAGCAACCCAGAGAGG
 CCCTGAGTCCCTGCCAAGTACCACAGCACCAAGTCTCAGCCGGGGAGCAGCGCCTCCTCCAGCTCTGG
 GGTGAAAATGACCAGCTTCGCTGAGCAGAAGTTCAGGAAGCTGAATCATACTGATGGGAAGAGTAGTGGG
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 CTCTCCGAGAGGAAGCAGCAGGTGCAGAAGACGAGAAAGTATATACTGACCGAGCCAAAGAGAAGGAGTC
 ACAGAAAATGGACGGGCAGAGGAGCAAGTCTTAGCAGACATAAAAGAAAGCATGGAGAACCCTCAGGGC
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 AGACTTTAAATGAGGGAGAACTTTAGAGTACACAAAGTCCATCGAAAAGCTGAATTCATCCCTGCACTT
 TCTACAACAGGAAATGCAGCGCTTGTCCCTTCAGCAGGAGATGTTAATGCAGATGAGAGAGCAGCAGTCT
 TGGGTGATCTCACCTCCGAGCCCTCTCCACAGAAGCAGATCCGCGATTTTAAACCTAGACAGGCAGGCC
 TGTCTGAGTCTGACCGTTCCTCAGCAGACTCCCCACGCCCACTCATCCGTCTCCGAGTCTTCTAC
 CAGGAAGAGTGCATCTTTTTCTGTTAAAAATCAAAGGACTCCAAGGCCAAATGAATTAATAAATCTCT
 CTGAATCGAACCTTGACACCTCCTCGGTCTGTGGATAGTCTTCTCGGCTAAGGAGGTTTTCCCCGAGCC
 AGGTTCCCATTCAGACACGGTCGTTCTGATGTTTTGGTATGATGGAGAGCCCCAAAAGAGCCCCAAACC
 AAAAGAGGAGATTA AAAAGGAGCCTTCAGAGTGCAAAGGGACTTTGGAATCTTGACCATAATCCTGGG
 GAGAAGGAGGTTAAACCTTTGAATCAACAGTGTCTGAAGTGTGTCACAGCCCATCACAGAGACTGTGT
 GTGTGACACCAAATGAGGACCAACTGAATCAACCCACAGATCCTCCGCCTAAGCCGTTTTCCACCTAC
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 ATTGAGGAGAGAGAAGGAAACTCAGCTTCGGAAGCAGCAGCTGGAAGCGGAGATGGAGCATAGGAAAGAG
 GAGACGAGGCGAAAACCTGAGGAAGAAGCTCAGAAGAAAGAGGACGAGCGGGCACGGAGAGAATTCATTA
 GGCAGGAGTACATGAGGCGAAAGCAGCTGAAGCTAATGGAGGACATGGACACAGTAAATCAAGCCTCGGCC
 TCAGGTGGCAAAACAGAAAAACAGCGGCCAAAATCTATTACAGAGATCATATTGAATCTCCCAAAACA
 CCAATCAAAGGCCCTCCAGTCTCTAGCCTCTCTGTCATCGCTGAACACAGGTGATACCGAGAGTGTTT
 ATTCAGGCAAGAGGACACCAAGGTGAGAGTCTGTAGAAGGCTTCTTATCTCCAAGTCGCTGTGGCAGTCG
 GAATGGCGAGAAAGACTGGGAAAACGCATCCACGACCTTTCAGTGGCTTCTGGAACAGAAATACACAGGA
 CCAAAGCTTTACAAGAACCTAGCGCAAAATCCAATAAACACATAATACAGAATGCATTAGCTCATTGCT
 GTTTGGCTGAAAAGTAAATGAAGGTGAGAAGAAAAAATATTAGAGGAAATGGAGAAGTCAGATGCCAA
 CAACTTCTAATCTTGTCCGGGATTCAGGCTGCCAGTTCAGGCTTTGTATACTTACTGCCAGAAAAT
 GAAGAAAATCAATAAACTGACTGGGATAGGCCCTAAGTCTATCACTAAAAAGATGATTGAGGGGCTTTACA
 AGTACAATTCTGACAGAAAACAGTTTAGCCACATACCTGCTAAAACCTTATCTGCTAGTGTGGATGCCAT
 TACCATTATAGCCACTTGTGGCAGACCAAAAGACCAGTGACACCCAAAAAACTTTACCTACTAAAGCA
 TAG

ACGCGTACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
 ACCN: NM_001134503
 Insert Size: 4413 bp

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| 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: | <u>NM_001134503.1</u> , <u>NP_001127975.1</u> |
| RefSeq Size: | 7719 bp |
| RefSeq ORF: | 4413 bp |
| Locus ID: | 289400 |
| UniProt ID: | <u>D4AEC2</u> |
| Cytogenetics: | 13q13 |
| Gene Summary: | Key microtubule-organizing protein that specifically binds the minus-end of non-centrosomal microtubules and regulates their dynamics and organization (PubMed:24908486). Specifically recognizes growing microtubule minus-ends and autonomously decorates and stabilizes microtubule lattice formed by microtubule minus-end polymerization (By similarity). Acts on free microtubule minus-ends that are not capped by microtubule-nucleating proteins or other factors and protects microtubule minus-ends from depolymerization (By similarity). In addition, it also reduces the velocity of microtubule polymerization (By similarity). Through the microtubule cytoskeleton, also regulates the organization of cellular organelles including the Golgi and the early endosomes (By similarity). Essential for the tethering, but not for nucleation of non-centrosomal microtubules at the Golgi: together with Golgi-associated proteins AKAP9 and PDE4DIP, required to tether non-centrosomal minus-end microtubules to the Golgi, an important step for polarized cell movement (By similarity). Also acts as a regulator of neuronal polarity and development: localizes to non-centrosomal microtubule minus-ends in neurons and stabilizes non-centrosomal microtubules, which is required for neuronal polarity, axon specification and dendritic branch formation (PubMed:24908486). Through the microtubule cytoskeleton, regulates the autophagosome transport (By similarity). [UniProtKB/Swiss-Prot Function] |