

Product datasheet for MC224050

Camsap3 (NM_027171) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Camsap3 (NM_027171) Mouse Untagged Clone
Tag: Tag Free
Symbol: Camsap3
Synonyms: 2310057J16Rik; Kiaa1543; Nezha
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC224050 representing NM_027171
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGTGAAGCGGCCCGCAGGGTCCGGGCCACTGCGGAGGACTTTCCTGGTCCCCGAGATCAAGTCTT
 TGGACCAGTACGATTTCTCTCGAGCCAAGGCGGGCGGAGTCTGGCGTGGGTGCTGCGGGCCGATTCCGG
 GGGAGCAGAGCATGTGCCTCCGGAGCTGTGGGAACCCCTTCTACACCGATCAGTACGCACAGGAGCAGCTG
 AAGCCCCCAGTGACGCGGCTGTGCTCTCTGCGGAATACTGTGCGGCCTGGCCGAGGCACTGCCAC
 AGCTCGAGCCATCCCCAGTCCCTCTGCTCTGTTGGCCTTGTGGCGAGGAGGGGACGGTGCCTTCACT
 GCCTGAGCACCCAGTGCAGGAGGCTGACCTGAAACACCAGCCAATTCTCATGGGAGCCACCTAGCTGTC
 ATCGATGCTCTCATGGTTGCCTTCTCATTTGAGTGGACAAAGACTACCTGGTCCCTTGGCTCTGAGCA
 GCTTGGAGCACAACCTCTTTTCTGGGTAGACACAACCTGTTCCGGCGGCTGCAGGAGAAGACAGAACAAGA
 AGCAGCCCAGCGTGCATCTCTGCAGCCCTCTGGATGGGGCCTCTCTGCCAGCCCTCGATTTCGATAT
 CGCAAGGACCGTGCATTGCCCGAAGGGCTCCCTGCTTTCCAAATGTGACTACCCCTCAGGACCTGGCCA
 GTGGGGCAGCACTGGCTGCCACCATCCACTGCTATTGTCCCGAGTATTACGACTTGAGGAGGTGTCCT
 CAAGGACCCCATGTCTGTGGCAGACAGTCTATACAACCTCCAGCTGGTGAAGACTTCTGTGCCTCCCAT
 CTTCCTCGAGGCTGCCCCCTGTCCCTTGAAGACTTGTGTATGTCCACCACCCCTCAAGGTCAACCTGG
 TGGTGCTGTTGGCTGAGATGTATATGTGCTTTGAGGTTCTGAAGCCTGATTTTGTGCAGGCCAAAGACTT
 GCCTGATGGACATGCTGTCTCCCCCGGAATACAGAGACTGTTCCATCTCAGAACAACAGTGGCAGCAGT
 TCTCTGTCTTCAACTCCGTCACCCACTTCTGTACCTGGTGGTCCCCAGTCTCCACTCCGAGGATCCA
 CAGGCTCCCTGAAGTCTCTCCATCAATGTCTCACATGGAGGCTCTTGGCAAAGCCTGGAACCGTCAGCT
 TAGCCGTCCTCTCCAGGCTGTGTCGTTCCAGCACTCCCTTTGGCCTGGACAGCGATGTGGATGTCGTC
 ATGGGAGATCCTGTCTGCTCCGCTCCGTCAGCTCAGACAGTCTGGGTCCTCCAGTCTCTGTGTCAACAT
 CATCCCGAATTCTGCTCAGCCAGCCCCAGAATCTGGAGACCTACCCACGATTGAAGAGGCCCTGCAGAT
 CATTACAGTGTGAGCCCCGACTGCTCCCTGATGGGGCTGTGATGGCAGTTTCTACCTCCATTCTCTCT
 GAGGGTCTCTCAAACCACCACTCTCCCTACCTCCCGAAGGAGCCTCAAAGCCGCTGTCTGATAGGC



TCAACAAGGCGCCTATCTATATATCACACCCTGAGAACCCTTCAAATCATCTCCCTGCTCAACAGGAGA
 GATACTGAAACCACCACCCCATCCGAGGGTCCCCCAAAGCTGTGGCTTCATCCCAGCAGCAACAAC
 TCCGAAGTGAAGATGACCAGTTTGTGTAACGCAAGAAACAGCTGGTGAAGGCTGAGGCTGAGTCAGGAT
 TGGGGTCTCCAACATCCACCCCGTAGCACCTGAGGCCTTGAGCTCAGAGATGAGTGAGCTGGGAGCCAG
 GCTGGAGGAGAAGCGCCGAGCCATAGAGGCACAGAAACGACGATTGAGGCAATCTTTGCCAAGCATAGG
 CAGAGGCTGGGCAAGAGCGCTTCTGCAGGTGCAGCTCGGGAGGCTGCAGGGGAGCCGAGGAGGAAG
 CTGAGCTGGGCTCAGTTCTGGTGGGAACGGCCAGCAGGTGAGGGCCAGGGTGAAGCCCTTACGGCA
 CAAGTCAGTTACCTTCTCTCCAGACCTGGGCCAGTGCCCCAGAGGGACTTGGGGATTACAATAGAGCA
 GTCAGTAAAGTGAAGTCCGCTCTGAGCTCTGACGCGGACATGCAGAGGCTCAGACACCAGCAACAGC
 GGCTTCTAGCCCCTCAGAAGCTCCTGGACCTGCCCCACCACCTGCAGCCTGGGTATTCTGGACCCGC
 CACTGGGCTAAAGCAGCATCCCCAGCCCTGCCCGTCTGCCCCAGCTGCCGACGCAGCCCTGGGCCA
 GGCCCCAGCCCAACCCCGTAGTCCAAAACATGCAAGGCCGGCAGAGCTGAAGTTGCACCTTTGACAA
 GGGTACTCACACCACCCATGATGTAGACAGCCTCCCTCACCTACGCAAGTTTTACCCAGCCAGGTGCC
 TGTACAGACTCGCTCCTATCCTCCTGTCGGAGGGGACACCTCCCGAGGAGCCACCACCAAGCCTGCC
 CTATTGAGATCCCTTAGCCAGCCTGGGGAGCCTGCTGCTGATGAGGAAGGAGATGGGAGCCCCCTG
 GGGCTGAGGATTCTTAGAGGAAGAGGCATCTTCTGAGGGAGAGCCCGATCAGGGCTTGGATTCTTTTA
 TAAGGACGAAGACAAGCCTGAGGATGAGATGGCTCAGAAGCGAGCTAGCCTGCTGGAGCGTCAGCAGAGG
 CGGGTAGAGGAAGCCCGCGCGCAAACAGTGGCAGGAGGCAGAGAAGGAGCAGAAACGGGAGGAGGCCG
 CCAGGCTGGCTCAGGAGGCTCCAGGCTTGGCCTTTACAACCTCTGTTGTAGCCTCTGCGGCTCCAGTGGC
 CACCTTGGCTCCTACTACCAGAGCCATGGCCCCAGCTGAGGAGGAGTGGGCCCCCGCGGGGGGACTTC
 ACAAGACTTGAGTATGACGCGCGGCACAACCTGAAACTGATGGATGACCTTGATAAGGTGCTACGGCCCC
 GGGCCTCAGGGACCGGGGACCAGGGCGGGGCGGGCAGGGCCACCCGGCCAGCTCTGGTTGCTGTGA
 TGACTCGGCCTTGGCACGAAGCCAGCCCGCGCCTGCTGGTTACGGCTCAGCAAGTCTATTTCCAG
 TCCACGCTGTCCCTATCTACGGTGGCCAACGAGGCTCCCAATAACCTTGGTGTGAAGAGGCCACCTCTC
 GGGCCCCCTTCCATCAGGCCTCATGTCTCCAAGCCGCTGCCTGGCAGTCGAGAACGTGACTGGGAGAA
 TGAAGCAATGCATCCTCCCAGCATCAGTGCCTGAGTACACAGGTCCCGGCTATAACAAGAACCCAGC
 GCCAAGTCTAACAAAGTTTATCATCCACAATGCCTTGTCACACTGCTGCCTGGCAGGCAAGGTGAATGAGC
 CCCAGAAGAACAAGATTCTAGAGGAAATCGAGAAAAGCAAGGCCAACCTTCTGATTCTTTTCGGGA
 CTCAAGCTGCCAGTTCGGGCCCTCTACACTCTGTCTGGGAGACAGAGGAGCTATCGAGGCTGGCAGGC
 TATGGGCTCGGACCGTCACTCCTGCCATGGTGAAGGCATCTATAAGTACAACCTCGGATCGAAACGGT
 TCACCCAGATCCCTGCTAAAACCATGTCTATGAGTGTAGACGCTTCACTATCCAGGACACCTTTGGCA
 AAGCAAGAAGCCACCACGCCCAAGAAGGTGGCGGTACCCCAAATAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

Sgfl-Mlul

ACCN:

NM_027171

Insert Size:

3759 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_027171.3](#), [NP_081447.2](#)

RefSeq Size: 4303 bp

RefSeq ORF: 3759 bp

Locus ID: 69697

UniProt ID: [Q80VC9](#)

Cytogenetics: 8 A1.1

Gene Summary:

Key microtubule-organizing protein that specifically binds the minus-end of non-centrosomal microtubules and regulates their dynamics and organization (PubMed:23169647, PubMed:24706919, PubMed:26715742). Specifically recognizes growing microtubule minus-ends and autonomously decorates and stabilizes microtubule lattice formed by microtubule minus-end polymerization (PubMed:24706919). Acts on free microtubule minus-ends that are not capped by microtubule-nucleating proteins or other factors and protects microtubule minus-ends from depolymerization (PubMed:24706919). In addition, it also reduces the velocity of microtubule polymerization (PubMed:24706919). Required for the biogenesis and the maintenance of zonula adherens by anchoring the minus-end of microtubules to zonula adherens and by recruiting the kinesin KIFC3 to those junctional sites (By similarity). Required for orienting the apical-to-basal polarity of microtubules in epithelial cells: acts by tethering non-centrosomal microtubules to the apical cortex, leading to their longitudinal orientation (PubMed:26715742). Plays a key role in early embryos, which lack centrosomes: accumulates at the microtubule bridges that connect pairs of cells and enables the formation of a non-centrosomal microtubule-organizing center that directs intracellular transport in the early embryo (PubMed:28860385). Couples non-centrosomal microtubules with actin: interaction with MACF1 at the minus ends of non-centrosomal microtubules, tethers the microtubules to actin filaments, regulating focal adhesion size and cell migration (By similarity). Plays a key role in the generation of non-centrosomal microtubules by accumulating in the pericentrosomal region and cooperating with KATNA1 to release non-centrosomal microtubules from the centrosome (By similarity). Through the microtubule cytoskeleton, also regulates the organization of cellular organelles including the Golgi and the early endosomes (By similarity). Through the microtubule cytoskeleton, also regulates the organization of cellular organelles including the Golgi and the early endosomes (By similarity). Through interaction with AKAP9, involved in translocation of Golgi vesicles in epithelial cells, where microtubules are mainly non-centrosomal (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) lacks two exons in the 5' coding region compared to variant 3. The encoded isoform (2) is shorter than isoform 3.