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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
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF:

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>MC224050 representing NM_027171
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGTGGAAGCGGCGCCCGCAGGGTCCGGGCCACTGCGGAGGACTTTCCTGGTCCCCGAGATCAAGTCTT
TGGACCAGTACGATTTCTCTCGAGCCAAGGCGGCGGCGAGTCTGGCGTGGGTGCTGCGGGCCGCATTCGG
GGGAGCAGAGCATGTGCCTCCGGAGCTGTGGGAACCCTTCTACACCGATCAGTACGCACAGGAGCACGTG
AAGCCCCCAGTGACGCGGCTGCTGCTCTCTGCGGAACTATACTGTCGGGCCTGGCGCCAGGCACTGCCAC
AGCTCGAGCCATCCCCCAGTCCCTCTGCTCTGTTGGCCTTGCTGGCGAGGAGGGGCACGGTGCCTTCACT
GCCTGAGCACCCAGTGCGCGAGGCTGACCTGAAACACCAGCCAATTCTCATGGGAGCCCACCTAGCTGTC
ATCGATGCTCTCATGGTTGCCTTCTCATTTGAGTGGACAAAGACACTACCTGGTCCCTTGGCTCTGAGCA
GCTTGGAGCACAAACTCCTTTTCTGGGTAGACACAACTGTTCGGCGGCTGCAGGAGAAGACAGAACAAGA
AGCAGCCCAGCGTGCATCTCCTGCAGCCCCTCTGGATGGGGCCTCTCCTGCCCAGCCCTCGATTCGATAT
CGCAAGGACCGTGCCATTGCCCGAAGGGCTCCCTGCTTTCCAAATGTGACTACCCTTCAGGACCTGGCCA
GTGGGGCAGCACTGGCTGCCACCATCCACTGCTATTGTCCCCAGCTATTACGACTTGAGGAGGTGTGCCT
CAAGGACCCCATGTCTGTGGCAGACAGTCTATACAACCTCCAGCTGGTGCAAGACTTCTGTGCCTCCCAT
CTTCCTCGAGGCTGCCCCCTGTCCCTTGAAGACTTGCTGTATGTCCCACCACCCCTCAAGGTCAACCTGG
TGGTGCTGTTGGCTGAGATGTATATGTGCTTTGAGGTTCTGAAGCCTGATTTTGTGCAGGCCAAAGACTT
GCCTGATGGACATGCTGTCTCCCCCCGGAATACAGAGACTGTTCCATCTCAGAACAACAGTGGCAGCAGT
TCTCCTGTCTTCAACTTCCGTCACCCACTTCTGTCACCTGGTGGTCCCCAGTCTCCACTCCGAGGATCCA
CAGGCTCCCTGAAGTCCTCTCCATCAATGTCTCACATGGAGGCTCTTGGCAAAGCCTGGAACCGTCAGCT
TAGCCGTCCCCTCTCCCAGGCTGTGTCGTTCAGCACTCCCTTTGGCCTGGACAGCGATGTGGATGTCGTC
ATGGGAGATCCTGTCCTGCTCCGCTCCGTCAGCTCAGACAGTCTGGGTCCTCCACGTCCTGTGTCAACAT
CATCCCGGAATTCTGCTCAGCCAGCCCCAGAATCTGGAGACCTACCCACGATTGAAGAGGCCCTGCAGAT
CATTCACAGTGCTGAGCCCCGACTGCTCCCTGATGGGGCTGCTGATGGCAGTTTCTACCTCCATTCTCCT
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GAGGGTCTCTCCAAACCACCACTCTCCCCCTACCCTCCCGAAGGAGCCTCAAAGCCGCTGTCTGATAGGC
TCAACAAGGCGCCTATCTATATATCACACCCTGAGAACCCTTCAAAATCATCTCCCTGCTCAACAGGAGA
GATACTGAAACCACCACCCCCATCCGAGGGTTCCCCCAAAGCTGTGGCTTCATCCCCAGCAGCCAACAAC
TCCGAAGTGAAGATGACCAGTTTTGCTGAACGCAAGAAACAGCTGGTGAAGGCTGAGGCTGAGTCAGGAT
TGGGGTCTCCAACATCCACCCCCGTAGCACCTGAGGCCTTGAGCTCAGAGATGAGTGAGCTGGGAGCCAG
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CAGAGGCTGGGCAAGAGCGCTTTCCTGCAGGTGCAGCCTCGGGAGGCTGCAGGGGAGGCCGAGGAGGAAG
CTGAGCTGGGCTCAGTTCCTGGTGGGGAACGGCCAGCAGGTGAGGGCCAGGGTGAGCCGTCCTTACGGCA
CAAGTCAGTTACCTTCTCTCCAGACCTGGGCCCAGTGCCCCCAGAGGGACTTGGGGATTACAATAGAGCA
GTCAGTAAGCTGAGTGCCGCTCTGAGCTCTCTGCAGCGGGACATGCAGAGGCTCACAGACCAGCAACAGC
GGCTTCTAGCCCCTCCAGAAGCTCCTGGACCTGCCCCACCACCTGCAGCCTGGGTCATTCCTGGACCCGC
CACTGGGCCTAAAGCAGCATCCCCCAGCCCTGCCCGTCGTGCCCCAGCTGCCCGACGCAGCCCTGGGCCA
GGCCCCAGCCCAACACCCCGTAGTCCAAAACATGCAAGGCCGGCAGAGCTGAAGCTTGCACCTTTGACAA
GGGTACTCACACCACCCCATGATGTAGACAGCCTCCCTCACCTACGCAAGTTTTCACCCAGCCAGGTGCC
TGTACAGACTCGCTCCTCTATCCTCCTGTCGGAGGGGACACCTCCCGAGGAGCCCACCACCAAGCCTGCC
CTCATTGAGATCCCTCTAGCCAGCCTGGGGGAGCCTGCTGCTGATGAGGAAGGAGATGGGAGCCCCCCTG
GGGCTGAGGATTCCTTAGAGGAAGAGGCATCTTCTGAGGGAGAGCCCCGATCAGGGCTTGGATTCTTTTA
TAAGGACGAAGACAAGCCTGAGGATGAGATGGCTCAGAAGCGAGCTAGCCTGCTGGAGCGTCAGCAGAGG
CGGGTAGAGGAAGCCCGGCGGCGCAAACAGTGGCAGGAGGCAGAGAAGGAGCAGAAACGGGAGGAGGCCG
CCAGGCTGGCTCAGGAGGCTCCAGGCTTGGCCTTTACAACTCCTGTTGTAGCCTCTGCGGCTCCAGTGGC
CACCTTGGCTCCTACTACCAGAGCCATGGCCCCAGCTGAGGAGGAGGTGGGCCCCCGGCGGGGGGACTTC
ACAAGACTTGAGTATGAACGCCGGGCACAACTGAAACTGATGGATGACCTTGATAAGGTGCTACGGCCCC
GGGCCTCAGGGACCGGGGGACCAGGGCGGGGCGGGCGCAGGGCCACCCGGCCACGCTCTGGTTGCTGTGA
TGACTCGGCCTTGGCACGAAGCCCAGCCCGCGGCCTGCTGGGTTCACGGCTCAGCAAGGTCTATTCCCAG
TCCACGCTGTCCCTATCTACGGTGGCCAACGAGGCTCCCAATAACCTTGGTGTGAAGAGGCCCACCTCTC
GGGCCCCTTCTCCATCAGGCCTCATGTCTCCAAGCCGCCTGCCTGGCAGTCGAGAACGTGACTGGGAGAA
TGGAAGCAATGCATCCTCCCCAGCATCAGTGCCTGAGTACACAGGTCCCCGGCTATACAAGGAACCCAGC
GCCAAGTCTAACAAGTTTATCATCCACAATGCCTTGTCACACTGCTGCCTGGCAGGCAAGGTGAATGAGC
CCCAGAAGAACAGAATTCTAGAGGAAATCGAGAAAAGCAAGGCCAACCACTTCCTGATTCTCTTTCGGGA
CTCAAGCTGCCAGTTCCGGGCCCTCTACACTCTGTCTGGGGAGACAGAGGAGCTATCGAGGCTGGCAGGC
TATGGGCCTCGGACCGTCACTCCTGCCATGGTCGAAGGCATCTATAAGTACAACTCGGATCGCAAACGGT
TCACCCAGATCCCTGCTAAAACCATGTCTATGAGTGTAGACGCCTTCACTATCCAGGGACACCTTTGGCA
AAGCAAGAAGCCCACCACGCCCAAGAAGGGTGGCGGTACCCCCAAATAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

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).

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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

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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.

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