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Product datasheet for MC225406

Akap13 (NM_029332) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Akap13 (NM_029332) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Akap13
Synonyms:	1700026G02Rik; 5730522G15Rik; 5830460E08Rik; AKAP-13; AKAP-Lbc; BRX; Ht31; LBC
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC225406 representing NM_029332 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGAAACTTAGTCCACAACAAGCTCCATTATATGGCGATTGTGTTGTTACAGTATTGCTTGCTGAAGAGG ACAAAGTTGAAGATGATGCTATTTTTTACTTGATATTTTCTGGCTCTACCCTCTATCACTGCACAAGTAC CCGGAAAGTCAGTTCTGATACGTTGGAGACAATTGCTCCTGGTCACGACTGCTGTGAGACAGTGAAGGTG CTGCTCTGTGCTTCCAGAGAGGGCCTTCCTGTGTTTGTAGTCGCTGAAGAAGACTTCCATTTCGTCCAGG ATGAGGCGTATGATGCAGCTCAGTTCCTGGCAACCAGTGCTGGAAATCAGCAGGCTCTGAACTTCACACG GTTCCTCGATCGATCAGGACCTCCTTCTAGAGATGTGAACTCTCTCGATGAGAAGGTGGCACTGGCATTC AGACACCTGAAGCTGCCTGCAGAATGGAACGTGTTAGGGACAGATCACACTTTGCATGACGGTGGCCCTC GGGAAACCCTGATGCACTTTGCTGTGCGGCTGGGACTGCTGCGGTTGACATGGTTCCTGTTACAGAAGCC AGGTGGCCGTGGAGCTCTCAGCATCCACAACAAGGAAGGGGCAACGCCTGTGAGCCTGGCACTGGAGCGA GGTTATCACGAACTTCACCAGCTTCTGACTGAGGAAAATGCAGGGGAGCCAGATTCCTGGAGCAGCTTAT CCTATGAAATCCCTTATGGCGACTGTTCAGTGAGGCACCATCGAGAACTGGACATCTACACATTGACTTC TGAATCCGAGTCACATCGTGAACCCCATGGAGACAGCTGTACTGGACATATTTCTAAACTTATGAATATC CAACAGCAGCTGATGAAAACAAACTTGAAGCAGATGGACAATCTCATGCCATTAATGGTGACAGCACAAG ATTCGTCTTGTGTGCCCAGTGTACCAGAGACAGATGGCCTATTCCTTCCCTGTGTACCAGAGCCTTCTGA CCACCAGCATCCTCCTTTTGAAGAAACTAAGAGCACTCTGTGCTGCCAAAGGAGTCCTGGGAGGATGGCT GAAAGTTCCTGTGATTTGTCAAGCATGGTTGAGGAAGAAAATGTCATCTGTTCTCATAAGAAAAATAAAG ATGTGGGGAGAAAGGGGGAAGAGGCGGAGCCAGCATCTGCCATGGACTCCGGGTCTGCATCTCATCAAGA CAGCTGCCTTCAGAGCGTACCCGACTGTGGAGTGAAGGGCAGAGAAGGTCTTCCATCCTGTGGAAACAGA AACGAAGTAACTGGAACAAACTATTCTGGAGTAGCCACATGTCAGCAGCCACTGAGCAGCAGGAGCAGTG TGCTGCAGGATGCCATGGTCACAGAACCAGATGCATGCCAGCACTCTTCTGGAAGGGAGCTACCAGACAG CTCTTCAACAGATGTTGGTGCCCCAGAAAAGGCAGGGGAACTGGAACATAGCCTGCTTACCCCAGATGCT ACCACCCAGAACAATAAGCCTCAAGTAGGGGAAGGCACAAAGGAAAGACTTGAGAATTCAGACAGTAGCA

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Restriction Sites: SgfI-MluI

ACCN: NM_029332

Insert Size:	8331 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_029332.1, NP_083608.1
RefSeq Size:	12543 bp
RefSeq ORF:	8331 bp
Locus ID:	75547
UniProt ID:	E9Q394
Cytogenetics:	7 D1

Gene Summary: Scaffold protein that plays an important role in assembling signaling complexes downstream of several types of G protein-coupled receptors. Activates RHOA in response to signaling via G protein-coupled receptors via its function as Rho guanine nucleotide exchange factor. May also activate other Rho family members (PubMed:23658642). Part of a kinase signaling complex that links ADRA1A and ADRA1B adrenergic receptor signaling to the activation of downstream p38 MAP kinases, such as MAPK11 and MAPK14. Part of a signaling complex that links ADRA1B signaling to the activation of RHOA and IKBKB/IKKB, leading to increased NF-kappa-B transcriptional activity. Part of a RHOA-dependent signaling cascade that mediates responses to lysophosphatidic acid (LPA), a signaling molecule that activates G-protein coupled receptors and potentiates transcriptional activation of the glucocorticoid receptor NR3C1 (By similarity). Part of a signaling cascade that stimulates MEF2C-dependent gene expression in response to lysophosphatidic acid (LPA) (By similarity). Part of a signaling pathway that activates MAPK11 and/or MAPK14 and leads to increased transcription activation of the estrogen receptors ESR1 and ESR2. Part of a signaling cascade that links cAMP and EGFR signaling to BRAF signaling and to PKA-mediated phosphorylation of KSR1, leading to the activation of downstream MAP kinases, such as MAPK1 or MAPK3 (By similarity). Functions as scaffold protein that anchors cAMP-dependent protein kinase (PKA) and PRKD1. This promotes activation of PRKD1, leading to increased phosphorylation of HDAC5 and ultimately cardiomyocyte hypertrophy (PubMed:24161911). Has no guanine nucleotide exchange activity on CDC42, Ras or Rac (By similarity). Required for normal embryonic heart development, and in particular for normal sarcomere formation in the developing cardiomyocytes (PubMed:20139090). Plays a role in cardiomyocyte growth and cardiac hypertrophy in response to activation of the beta-adrenergic receptor by phenylephrine or isoproterenol (PubMed:23658642, PubMed:24161911). Required for normal adaptive cardiac hypertrophy in response to pressure overload (PubMed:17537920, PubMed:24161911). Plays a role in osteogenesis (PubMed:25892096).[UniProtKB/Swiss-Prot Function]