

## Product datasheet for **MR222048**

### **Akap1 (NM\_009648) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Akap1 (NM_009648) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Akap1
Synonyms:	Akap; AKAP84; AKAP121; C76494; C81186; DAKAP1; S-AKAP84
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR222048 representing NM\_009648  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCAATCCAGTTGCGTTCGCTTCCCCTTGGCGTTGCCCGGAATGCTGGCCCTCCTTGCTGGTGGT  
 GGTTTTCTCTCGTAAAAAGATCGGCTCAGCAGCAGTGATAAGCAGGTGGAGACTGAAGTTGGCCC  
 TGCCATCAAGGACCGACGGCTCAGTGAAGAGCCGTGCTCGGAGTCTGTCTGTGCCCCCACTGTCACA  
 CAGCCTCTGGAAGGGAAGAGCAGCGCTGTGTGGACAAGCCTTCTACAGAGCCCTGGCCTTGGCGAGGA  
 CTCGCCAGGTTGACGAAGATCAGAGTCTCAGGCAACCTCCCAGCGTTGCAGACACGAGGTGCGACGC  
 AGGACCGTGCAGAGATGAGATCGCCAAAGTGGAACTCTCCCTGATGGGGGACAAAGCCAAATCTATTCT  
 CTTGGATGTCCGCTTCTCCAAAGGATGCGTCTTCCCCTATGAAGCAGTGGAAAGGTGTAAGCAGGAGT  
 CCGCACTGGGCAAGACTCCTGGAAGAGGCTGGCAAGCCCGTATGCGGCCCTGGAGAGAAAGCGAGAGA  
 GACAGGTGGGACAGAGGGGACTGGAGATGCTGTGTTGGGGGAAAATGTATCTGAGGAAGGCTATTGTCC  
 CAGGAGTGTCTCAGAAGTGGAGAAGAGTGGATTTCCAATCCTGGCCCCGGGGGAGGTGAGGGAGAAG  
 AGGTGAGCCATGGCCCCACAGGTAGCTGAACTTTTAAAGAAGGAAGAATATATTGTTGGGAAGTTGCC  
 GAGTAGCTTTGTGGAGCCAGTTCCTCAGAGCCGGTAAAGGACGAGGATGCGTTGGAACCCAGGTCAA  
 GGTAGCAGCAATACTTCGGATAGAGACCTGGCTGGAGAGCTGGACAAAGACGAGACCGTGCCTGAAAATG  
 ACCAGATTAAGCAGGCTGCCTTCCAGCTCATCTCCAGGTGATCTTGAAGCAACTGAAGAGTTTCGGGC  
 CACCACAGTGGCAAGACTGTGGACAAGTGCACCAACCTCGGCCACTCAGCCTAAGGGGAAGGAGGAG  
 AGCTGTGTTCCAGCCAGCCAGGAACTAGCTTGGGACAAGACACCTCAGATCCTGCTTCCACCAGAACAG  
 GTGCCACTGCCAGCCCTCAGCAGAAGCTCTGCCACCAAGACCTATGTAAGCTGTCTCAGCAGCCCTCT  
 GTCAGGCCCCACCAAGGACCAGAAGCAAGAAGCTCTGCACATCACATCTCCCTGGCTCCCTGCCACCCG  
 CCAGTCAACCCAGAGGCACTCTGGAGGGGCAAGTAACCCGAGAGGTGATGACAACCTTGTGCGCT  
 GTATGGCAACAACAGCCAGAGTGTCTTTAGTTAGCTCCTTGGGGCAGTGCTCAGATCCTGTCAGTAC  
 TTCGGGGCTTGAAGACTTGTGCACAGAGACCATCTCAAGCTCCGGAGACAAAGCTATGACCCCACTG  
 CCAGTCACTACTCAGCCCTTCCAGCAACGGGGTGTGAAGGAGGAGCTGTCAGACTTAGGGACCGAGGATG  
 GATGGACCATGGATACAGAAGCAGATCACTCAGGAGGTTCTGACGGGAACAGTATGGATTAGTGGATAG  
 CTGTTGCGGGCTTACCAAGCCCGATAGCCCCAGAGTGTCCAGGCAGGCTCAACCCCTAAGAAGGTTGAC  
 CTTATCATCTGGGAGATCGAGGTGCCAAAGCACTTAGTTGGTCGACTGATTGGCAAGCAGGGACGGTACG  
 TGAGTTTTCTGAAGCAGACATCTGGTGCCAAGATCTACATCTCCACCCTGCCTTACACACAGAACATCCA  
 GATCTGCCACATAGAAGGCTCTCAGCACCATGTAGACAAAGCTCTGAACTTGATTGGGAAGAAGTTAAG  
 GAACTGAACCTCACCAATATCTATGCGCCACCACTGCCTTCGCTGGCACTGCCTTCTTGGCGATGACGT  
 CTTGGCTCATGCTGCCTGATGGTATCACTGTGGAAGTCACTGCGTCAACCAGGTCAATGCTGGGCACCT  
 ATTTGTCCAGCAGCACACACACCCACCTTCCATGCACTGCGCAGTCTGGACCAGCAGATGTACCTCTGT  
 TACTCTCAGCCTGGAATCCACCTTGGCCACCCAGTGGAAATCACGGTTATCTGCGCTGCCCTGGTG  
 CGGACGGGGCTGGTGGCGAGCCCAAGTAGTGGCTTCCATGAGGAGACCAATGAGGTGGAGATTCGCTA  
 CGTGGACTATGGTGGATATAAGAGAGTGAAGTGCAGTGTCTCCGCAAAATTAGGTCTGACTTTGTGACC  
 CTGCCATTCCAAGGAGCAGAAGTCTTCTGGACAGTGTGGTTCCCTGTGACAGATGATCATTTTTTAC  
 CGGAGGCAGACGAGCCATGAGTGAAGTACAGGCAATACAGCACTGTTGGCCAGGTGACAAGCTACAG  
 TGCGACTGGCCTTCTCTGATTAGCTATGGAGTGTGGTTGGAGATGAAGTGGTGTGATAAACCGGTCG  
 CTGGTGGAGCGAGGCTTGCACAGTGGGTAGACAGCTACTATGCCAGCCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR222048 representing NM\_009648  
 Red=Cloning site Green=Tags(s)

MAIQLRSLFPLALPGMLALLGWWFFSRKKDRLSSSDKQVETLKVGPAIKDRRLSEEACPGVLSVAPTVT  
 QPPGREEQRCDKPESTEPLALPRTRQVRRRSESSGNLPSVADTRSQPGPCRDEIAKVELSLMGDKAKSIP  
 LGCPLLPKDALFPYEAVERCKQESALGKTPGRGWPSPYAASGEKARETGGTEGTGDAVLGENVSEGLLS  
 QECVSEVEKSEFPILAPGGGEGEEVSHGPPQVAELLKKEEYIVGKLPSSFVEPVHSEPVKDEDALEPQVK  
 GSSNTSDRDLAGELDKDETVPENDQIKQAAFQLISQVILEATEEFRATTVGKTVAQVHPTSATQPKKEE  
 SCVPASQETSLGQDTSDPASTRTGATASPSAEALPPKTYVSSLSPLSGPTKDQKPKNSAHHISLAPCPP  
 PVTPQRQSLEGASNPRGDDNFVACMANNQSIVLSVSSLGQCDPVSTSGLEDSCTETISSSGDKAMTPPL  
 PVSTQPFNGVLKEELSDLGTEDGWTMDEADHSGGSDGNSMDSVSDCCGLTKPDSQSVQAGSNPKKVD  
 LIIWEIEVPKHLVGRLLIGKQGRYVSFLKQTSGAKIYISTLPTYQNIQICHIEGSQHHVDKALNLIGKKFK  
 ELNLTNIYAPPLPSLALPSLPMTSWMLPDGITVEIVVNQVNAGHLFVQQHTHTPFHALRSLDQQMYLC  
 YSQPGIPTLPTPVEITVICAAPGADGAWWRAQVVASYEETNEVEIRYVDYGGYKRVKVDVLRQIRSDFT  
 LPFQGAEVLLDSVVPLSDDHFSPEADAAMSEMTGNTALLAQVTSYSATGLPLIQLWSVVGDEVVLRNS  
 LVERGLAQWVDSYYASL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9003\\_e12.zip](https://cdn.origene.com/chromatograms/mm9003_e12.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

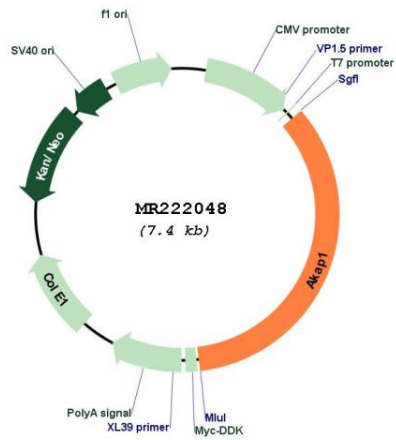
Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

<b>ACCN:</b>	NM_009648
<b>ORF Size:</b>	2571 bp
<b>OTI Disclaimer:</b>	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_009648.2</a> , <a href="#">NP_033778.2</a>
<b>RefSeq Size:</b>	3721 bp
<b>RefSeq ORF:</b>	2574 bp
<b>Locus ID:</b>	11640
<b>UniProt ID:</b>	<a href="#">O08715</a>
<b>Cytogenetics:</b>	11 C
<b>MW:</b>	92.6 kDa
<b>Gene Summary:</b>	Differentially targeted protein that binds to type I and II regulatory subunits of protein kinase A. Anchors them to the cytoplasmic face of the mitochondrial outer membrane or allows them to reside in the endoplasmic reticulum. Does not contain the classic KDEL endoplasmic reticulum-targeting sequence. This explains how it is able to switch its localization, either being in the endoplasmic reticulum or in the mitochondria depending on which N-terminal part begins the isoform. The longest N-terminal part only present in isoform 2 and isoform 4 acts as a suppressor of mitochondrial targeting and as an activator of recessive endoplasmic reticulum targeting motif.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR222048