

## Product datasheet for **MG222020**

### Akap10 (NM\_019921) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Akap10 (NM_019921) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Akap10
Synonyms:	1500031L16Rik; B130049N18Rik; D-AK; D-AKAP-2; D-AKAP2; PRKA10
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG222020 representing NM\_019921  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGGGGAGCCGGCCCTCCCCGCGACTCCCCCGGCCCTCCGCCCGACCCGGGCCCCGCCATGT  
 CCTTCTCCGGCGGAAAGTGAAAGGTAAAGAGCAAGAGAAGACCTTAGATGTCAAGTCCACTAAAGCTTC  
 AGTAGCCGTACATTCCCCACAAAAAGCACTAAAAATCATGCCTTCTGGAGGCTGCAGGACCAAGTCAT  
 GTTGCGATCAATGCCATTTCTGCCAACATGGACTCCTTTTCAAGTAGCAGGACAGCAACGCTTAAGAAAC  
 AGCCAAGCCACATGGAGGCTGCTCATTTTGGAGACCTAGGCAGATCCTGTCTGGACTATCAGACTCAAGA  
 GACCAATCCAGTCTTTCAAAGACCTTGAACAAGTCTTGCCTGACTGTTGCTCCTCCATATTTCTT  
 CAGTTTATGGAAGTTCGGAGAATGGAGCACCTGGTAAATTTTGGTTAGAGGCTGAAAGTTTCACTCTA  
 CAACGTGGTCCCAGTAAGAGCACACAGTCTAAACACAGTAAACAGAGTTCAGTGGCTGAGCCTGTCTC  
 TCCATCTAAAAGACATGAGACTCCAGCATTTCTGTAAGTGGGCTCTTGACAGGAGTTGGGGATTCT  
 AGCTCAGCCCCACTGCTTGTGACTCAATCAGAAGGAAGTACCTGAGTAGTGAAGTCCAGAACCCCTCAGA  
 ACCACTTGTCTTTCCAGGAAGGCCACAGTGCCTGCTCTCCATCGTGGGTCGAGGTCGAGAACAGGAAG  
 TCATCAGATTCACCGACTCCCAGGACTCCTCCTCCAGACTTGCAGTAGGCAGTAGAAACAGTTGCTCT  
 TCTCCACTGAGAGAAGTGTGAGAAAACTAATGAAAAGTATAGAACAAAGTGCAGTGAATACTTTTACCA  
 AATATATATCTCCAGATGCTGCTAAGCCAATACCAATTACAGAAGCCATGAGAAACGACATCATCGAAA  
 GATTTGTGGAGAAGATGGACAGGTGGATCCCAACTGTTTCTGTTTGGCACAGGCTGTAGTCTTTAGTGCA  
 ATGGAGCAAGAGCACTTTAGTGAGTTTCTGCGAAGTACCATTCTGTAATACCAGATTGAAGTGTGCA  
 CCAGTGGGACTGTTTACCTGGCTGATATCCTCTCTGTGAGTCAAGCCCTTTTTATTTTCTGAGTACAT  
 GGAAAAAGAAGATGCAGTGAATATCTTACAATTCTGGTTAGCAGCGGATAATTTCCAGTCTCAGCTTGT  
 GCCAAAAAGGGCCAGTATGATGGACAGGAGGCCAGAATGATGCCATGATTTTATATGACAAGTACTTTT  
 CCCTCCAAGCCACACACCCCTTGGATTTGATGATGTTGTACGATTAGAAATTGAATCTAATATCTGCAG  
 GGAAGGTGGACCACTTCTAATTGTTTCAACTCCATTACGTCAGGCCTGGACAACCATGGAGAAGGTC  
 TTTTGCCTGGTTTTCTGTCCAGCAATCTTTATTACAAATATTTGAATGATCTCATCCATTCAGTTCGAG  
 GAGATGAATTTCTGGAGGGAATGTTCCCTGGCTGCTCACGGCTCTGTCTGCCTCCTGAGGAGTCTCA  
 CTCAGGTGGTCCGATGGCTCCACTGCTCAGTCTAGTGTGAAAAAGCCAGTATTAATTTCTGAAAAAT  
 TTTGATGAAGCAATAATTGTGGATGCTGCAAGTCTGGACCCAGAATCTTTATATCAACGGACATATGCAG  
 GGAAGATGCTTTGGGAGAGTTAGTGATTTGGGGCAGTTCATCCGAGAGTCTGAGCCTGAACCTGATGT  
 GAAGAAATCAAAAGGATTCATGTTCTCACAAGCTATGAAGAAGTGGGTGCAAGGAAATACTGACGAGGCC  
 CAAGAAGAGCTAGCTTGGAAAGATTGCAAAAATGATAGTGAGTGATGTTATGCAGCAGGCACACCATGATC  
 AACCACTAGAGAAGTCTACAAAGCTA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG222020 representing NM\_019921  
Red=Cloning site Green=Tags(s)

```
MRGAGPSPRHSPRALRPDPGPAMSFRRKVKGKEQEKTLVDKSTKASVAVHSPQKSTKNHALLEAAGPSH
VAINAISANMDSFSSSRATLKKQPSHMEAAHFGLGRSCLDYQTQETKSSLSKTLEQVLRDVTVLPYFL
QFMELRRMEHLVKFWLEAESFHSTTWSRIRAHSLNTVKQSSLAEPVSPSKRHETPASSVTEALDRRLGDS
SSAPLLVTQSEGTDLSSRTQNPQNHLLLSQEGHSARSLHREVRTGSHQIPTDSQDSSSRLAVGSRNSCS
SPLRELSEKLMKSIEQDAVNTFTKYISPDAAKPIPITEAMRNDIIAKICGEDGQVDPNCFVLAQAVVFS
MEQEHFSEFLRSHHFCKYQIEVLTSQVYVYLAADILFCESALFYFSEYMEKEDAVNQLQFWLAADNFQSQLA
AKKGQYDGGQEAQNDAMILYDKYFSLQATHPLGFDDVVRLEIESNICREGGPLPNCFTTPLRQAWTTMEKV
FLPGFLSSNLYYKYLNDLIHSVRGDEFLLGGNVSLAAHGSVCLPEESHSGGSDGSTAQSSVKASIKILKN
FDEAIIVDAASLDPESLYQRTYAGKMSFGRVSDLGQFIRESEPEPDVKKSKGFMFSQAMKKWVQNGTDEA
QEELAWKIAKMIVSDVMQQAHHQPLEKSTKL
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_019921

**ORF Size:** 1986 bp

**OTI Disclaimer:** 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. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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\\_019921.3](#), [NP\\_064305.2](#)

**RefSeq Size:** 3848 bp

**RefSeq ORF:** 1989 bp

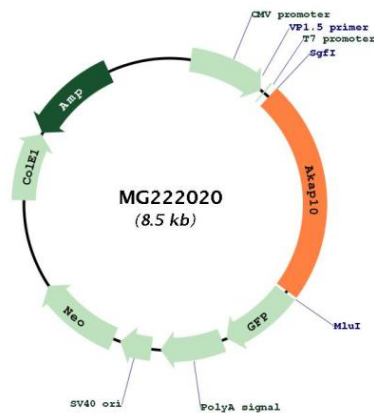
**Locus ID:** 56697

**UniProt ID:** [O88845](#)

**Cytogenetics:** 11 B2

**Gene Summary:** This gene encodes a member of A-kinase anchoring proteins (AKAPs), a family of functionally related proteins that target protein kinase A to discrete locations within the cell. The encoded protein is localized to mitochondria and interacts with both the type I and type II regulatory subunits of PKA. It has been reported that this protein is important for maintaining heart rate and myocardial contractility through its targeting of protein kinase A. In mouse, defects of this gene lead to cardiac arrhythmias and premature death. In humans, polymorphisms in this gene may be associated with increased risk of arrhythmias and sudden cardiac death. [provided by RefSeq, May 2013]

### Product images:



Circular map for MG222020