

## Product datasheet for RC221620

### AKAP12 (NM\_005100) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	AKAP12 (NM_005100) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	AKAP12
Synonyms:	AKAP250; SSeCKS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC221620 representing NM_005100 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGCGCCGGGAGCTCCACCGAGCAGCGCAGCCCGGAGCAGCCGCCGAGGGGAGCTCCACGCCGGCTG  
AGCCCGAGCCAGCGCGCGGCCCTCGGCCGAGGCGGCCAGACACCACCGCGGACCCGCCATCGC  
TGCCCGACCCCGCCACCAAGCTCCTACAGAAGAATGGTCAGCTGTCCACCATCAATGGCGTAGCTGAG  
CAAGATGAGCTCAGCCTCAGGAGGGTGACCTAAATGGCCAGAAAGGAGCCCTGAACGGTCAAGGAGCCC  
TAAACAGCCAGGAGGAAGAAGAAGTCAATGTCACAGAGGTTGGACAGAGAGACTCTGAAGATGTGAGCAA  
AAGAGACTCCGATAAAGAGATGGCTACTAAGTCAGCGGTTGTTACGACATCACAGATGATGGGCAGGAG  
GAGACACCCGAAATAATCGAACAGATTCCTTCTTCAGAAAGCAATTTAGAAGAGCTAACACAACCCACTG  
AGTCCCAGGCTAATGATATTGGATTTAAGAAGGTGTTAAGTTTGTGGCTTTAAATTCAGTGTGAAAA  
GGATAAGACAGAGAAGCCTGACACTGTCCAGCTACTCACTGTGAAGAAAGATGAAGGGGAGGGAGCAGCA  
GGGGCTGGCGACCACAAGGACCCAGCCTTGGGGCTGGAGAAGCAGCATCCAAAGAAAGCGAACCCAAAC  
AATCTACAGAGAAACCCGAAGAGACCCTGAAGCGTGAGCAAAGCCACGCAGAAATTTCTCCCCAGCCGA  
ATCTGGCCAAGCAGTGGAGGAATGCAAAGAGGAAGGAGAAGAGAAACAAGAAAAAGAACCTAGCAAGTCT  
GCAGAATCTCCGACTAGTCCCAGTCAAGTGAACAGGATCAACCTTCAAAAAATCTTCACTCAAGGTT  
GGGCCGGCTGGCCAAAAAGACCAGTTTCAGGAAGCCGAAGGAGGATGAAGTGGAAGCTTCAGAGAAGAA  
AAAGGAACAAGAGCCAGAAAAAGTAGACACAGAAGAAGACGGAAGGCAGAGGTTGCCTCCGAGAAACTG  
ACCGCCTCCGAGCAAGCCACCCACAGGAGCCGCGAGAAAGTGCACAGACCCCGGTTATCAGCTGAAT  
ATGAGAAAGTTGAGCTGCCCTCAGAGGAGCAAGTCAGTGGCTCGCAGGGACCTTCTGAAGAGAAACCTGC  
TCCGTTGGCGACAGAAGTGTGATGAGAAAATAGAAGTCCACCAAGAAGAGGTTGTGGCCGAAGTCCAC  
GTCAGCACCGTGGAGGAGAGAACCAGAGCAGAAAACGAGGTTGAAGAAACAGCAGGGTCTGTGCCAG  
CTGAAGAATTGGTTGAAATGGATGCAGAACCTCAGGAAGCTGAACCTGCCAAGGAGCTGGTGAAGCTCAA  
AGAAACGTGTGTTCCGGAGAGGACCCTACACAGGGAGCTGACCTCAGTCTGATGAGAAGTGTCTGCC



AAACCCCCGAAGGCGTTGTGAGTGAGGTGGAATGCTGTCATCACAGGAGAGAATGAAGGTGCAGGGAA  
 GTCCACTAAAGAAGCTTTTTACCAGCACTGGCTTAAAAAGCTTTCTGGAAAAGAAACAGAAAAGGGAAAAAG  
 AGGAGGAGGAGACGAGGAATCAGGGGAGCACACTCAGGTTCCAGCCGATTCTCCGGACAGCCAGGAGGAG  
 CAAAAGGGCGAGAGCTCTGCCTCATCCCCTGAGGAGCCCGAGGAGATCACGTGTCTGGAAAAGGGCTTAG  
 CCGAGGTGCAGCAGGATGGGGAAGCTGAAGAAGGAGCTACTTCCGATGGAGAGAAAAAAGAGAAGGTGT  
 CACTCCCTGGGCATCATTCAAAAAGATGGTGACGCCCAAGAAGCGTGTAGACGGCCTTCGAAAAGTGAT  
 AAAGAAGATGAGCTGGACAAGGTCAAGAGCGCTACCTTGTCTTCCACCGAGAGCACAGCCTCTGAAATGC  
 AAGAAGAAATGAAAGGGAGCGTGGAAAGGCCAAAAGCCGGAAGAACCAGCGCAAGGTGGATACCTCAGT  
 ATCTTGGGAAGCTTTAATTTGTGTGGGATCATCCAAGAAAAGAGCAAGGAGAGGGTCTCTTCTGATGAG  
 GAAGGGGGACAAAAGCAATGGGAGGAGACCACCAGAAAGCTGATGAGGCCGGAAAAGACAAAGAGACGG  
 GGACAGACGGGATCCTTGTGGTCCCAAGAACATGATCCAGGGCAGGGAAGTCTCCCGGAGCAAGC  
 TGGAAAGCCTACCGAAGGGGAGGGCGTTTCCACCTGGGAGTCATTTAAAAGGTTAGTCACGCCAAGAAAA  
 AAATCAAAGTCCAAGCTGGAAGAGAAAAGCGAAGACTCCATAGCTGGGTCTGGTGTAGAATTCCACTC  
 CAGACTGAACCCGGTAAAGAAGAAATCCTGGGTCTCAATCAAGAAGTTTATTCTGGACGAAGGAAGAA  
 AAGGCCAGATGGGAAACAAGAACAAGCCCTGTTGAAGACGCAGGGCCAACAGGGGCCAACGAAGATGAC  
 TCTGATGTCCCGCCGTGGTCCCTCTGTCTGAGTATGATGCTGTAGAAAGGGAGAAAAATGGAGGCACAGC  
 AAGCCCAAAAAGCGCAGAGCAGCCGAGCAGAAAGGCAGCCACTGAGGTGTCCAAGGAGCTCAGCGAGAG  
 TCAGGTTCATATGATGGCAGCAGCTGTCGCTGACGGGACGAGGGCAGCTACCATTATTGAAGAAAGGTCT  
 CCTTCTGGATATCTGCTTCAGTGACAGAACCTTTGAACAAGTAGAAGCTGAAGCCGCACTGTTAACTG  
 AGGAGGTATTGAAAAGAGAAGTAATTGCAGAAGAAGAACCCCCACGGTACTGAACCTCTGCCAGAGAA  
 CAGAGAGGCCCGGGCGACACGGTCTAGTGAGGCGGAATTGACCCCGAAGCTGTGACAGCTGCAGAA  
 ACTGCAGGGCCATTGGGTGCCAAGAAGGAACCGAAGCATCTGCTGCTGAAGAGACCACAGAAATGGTGT  
 CAGCAGCTCCCAGTTAACCGACTCCCGACACCACAGAGGAGGCCACTCCGGTGCAGGAGGTGGAAAGG  
 TGGCGTACCTGACATAGAAGAGCAAGAGAGGGCGACTCAAGAGGTCTCCAGGCAGTGGCAGAAAAAGTG  
 AAAGAGGAATCCAGCTGCCTGGCACCGGTGGGCCAGAAGATGTCTTACGCTGTGCAGAGAGCAGAGG  
 CAGAAAGACCAGAAGAGCAGGCTGAAGCGTCGGGTCTGAAGAAAGAGACGGATGTAGTGTGAAAGTAGA  
 TGCTCAGGAGGCAAAAAGTGAAGCTTTTACACAAGGGAAGGTGGTGGGGCAGACCACCCAGAAAGCTTT  
 GAAAAAGCTCCTCAAGTACAGAGAGCATAGAGTCCAGTGAAGTGTAAACACTTGTCAAGCCGAAACCT  
 TAGCTGGGGTAAAATCACAGGAGATGGTGTGGAACAGGCTATCCCCCTGACTCGGTGGAACCCCTAC  
 AGACAGTGAGACTGATGGAAGCACCCCGTAGCCGACTTTGACGCACCAGGCACAACCCAGAAAGACGAG  
 ATGTGGAAATCCATGAGGAGAATGAGGTGCGATCTGGTACCCAGTCAGGGGGCACAGAAGCAGAGGCAG  
 TTCTGCACAGAAAGAGAGGCCCTCCAGCACCTTCCAGTTTTGTGTCCAGGAAGAACTAAAGAACAATC  
 AAAGATGGAAGCACTCTAGAGCATACAGATAAAGAGGTGTCAAGTGGAAACTGTATCCATTTCTGTCAAAG  
 ACTGAGGGGACTCAAGAGGCTGACCAGTATGCTGATGAGAAAACCAAAGACGTACCATTTTTCGAAGGAC  
 TTGAGGGGTCTATAGACACAGGCATAACAGTCAAGTCCGGGAAAAGGTCACTGAAGTTGCCCTTAAAGGTGA  
 AGGGACAGAAGAAGCTGAATGTA AAAAGGATGATGCTCTTGAAGTGCAGAGTACGCTAAGTCTCCTCCA  
 TCCCCCGTGGAGAGAGAGATGGTAGTTCAAGTCGAAAGGGAGAAAACAGAAGCAGAGCCAACCCATGTGA  
 ATGAAGAGAAGCTTGAGCACGAAACAGCTGTTACCGTATCTGAAGAGTCAAGTCAAGCAGCTCCTCCAGC  
 AGTGAATGTGCCATCATAGATGGGGCAAAGGAAGTCAAGCTTTGGAAGGAAGCCCTCCTCCCTGCCTA  
 GGTCAAGAGGAGGCAGTATGCACCAAAATTCAGTTTCAAGCTCTGAGGCATCATTCACTTAACAGCGG  
 CTGCAGAGGAGGAAAAGTCTTAGGAGAACTGCCAACATTTTAGAAAACAGGTGAAACGTTGGAGCCTGC  
 AGGTGCACATTTAGTTCTGGAAGAGAAATCCTCTGAAAAAATGAAGACTTTGCCGCTCATCCAGGGGAA  
 GATGCTGTGCCACAGGGCCGACTGTCAGGCAAAATCGACACCAGTGTAGTATCTGCTACTACCAAGA  
 AAGGCTTAAGTTCGACCTGGAAGGAGAGAAAACCATCACTGAAGTGGAAAGTCAAGTGAAGTCAAGTGA  
 GCAGGTTGCTTCCAGGAGGTCAAAGTGAAGTGTAGCAATTGAGGATTTAGAGCCTGAAAAAGGATTTT  
 GAACCTTGAGACAAAAGCAGTAACTTGTCCAAAACATCATCCAGACAGCCGTTGACCAGTTGTACGTA  
 CAGAAGAAACAGCCACCGAAATGTTGACGTCTGAGTTACAGACACAAGCTCACGTGATAAAGCTGACAG  
 CCAGGACGCTGGACAGGAAACGGAGAAAAGAGAGGAAACCTCAGGCCTCTGCACAGGATGAAACACCA  
 ATTACTTCAGCCAAAGAGGAGTCAAGTCAACCGCAGTGGGACAAGCACATTCTGATATTTCCAAAGACA  
 TGAGTGAAGCCTCAGAAAAGACCATGACTGTTGAGGTAGAAGGTTCCACTGTAATGATCAGCAGCTGGA  
 AGAGGTCGTCCTCCATCTGAGGAAGAGGGAGGTGGAGCTGGAACAAAGTCTGTGCCAGAAGATGATGGT  
 CATGCCTGTTAGCAGAAAAGATAGAGAAGTCAAGTGAACCGAAAAGATGAAAAGGTGATGATG

TTGATGACCCTGAAAACCAAGAACTCAGCCCTGGCTGATACTGATGCCTCAGGAGGCTTAACCAAAGAGTC  
 CCCAGATACAAATGGACCAAAACAAAAGAGAAGGAGGATGCCAGGAAGTAGAATTGCAGGAAGGAAAA  
 GTGCACAGTGAATCAGATAAAGCGATCACACCCCAAGCACAGGAGGATTACAGAAAACAGAGAGAGAAT  
 CTGCAAAGTCAGAACTTACAGAATCT

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC221620 representing NM\_005100  
 Red=Cloning site Green=Tags(s)

MGAGSSTEQRSPPEQSPPEGSSTPAEPEPSGGGSAEAPDPTADPAIAASDPATKLLQKNGQLSTINGVAE  
 QDEL SLQEGDLNGQKALNGQALNSQEEEEVIVTEVGQRDSEVSKRDSKEMATKSAAVHDDITDDGQE  
 ETPEIIIEQIPSSSENLLELTQPTESQANDIGFKKVFVGFVGFVTKKDKTEKPDVTQLLTVKKDEGEGAA  
 GAGDHKDP SLGAGEAASKESEPKQSTKPEETLKRQSHAEISPPAESGQAVEECKEEGEEKQEKEPSKS  
 AESPTSPVTSETGSTFKKFTTQGWAGWRKTSFRKPKEDVEASEKKQEPEKVDTEEDGKAEVASEKL  
 TASEQAHQPESAHEPRLSAEYKVELPSEEQVSGSQPSEEKPAPLATEVFDEKIEVHQEEVVAEVH  
 VSTVEERTEEQTEVEETAGSVPAAELVEMDAEPQEAPEKELVKLKETCVSGEDPTQGADLSPDEKVL  
 KPPEGVVSEVEMLSSQERMKVQGSPLKLLFTSTGLKLSGKKQKGRGGGDEESGEHTQVPADSPDSQEE  
 QKGESSASSPEEPETITCLEKGLAEVQDGEAEEGATSDGEEKREGVTPWASFKKMVTPKRVRPSES  
 KEDELDKVKSATLSSSTESTASEMQEEMKGSVEEPKPEEPKRVDTSVSWEALICVGSKKRARRGSSDE  
 EGGPKAMGGDHQKADEAGKDKETGTDGILAGSQEHDPGQSSSPEQAGSPTTEGEGVSTWESFKRLVTPRK  
 KSKSKLEEKSEDSIAGSGVEHSTPDTPEKESWVSIKFIIPGRRKRPDQKQEQAPVEDAGPTGANEDD  
 SDVPAVVPLSEYDAVEREKMEAQAQKSAEQPEKAATEVSKELSESQVHMMAAAVADGTRAATIIERS  
 PSWISASVTEPLEQVEAEALLTEEVLEREVI AEEEPPTVTEPLPENREARGDVTVSEALTEAVTAAE  
 TAGPLGAEEGTEASAAEETTEMVSAVQLTDSPTTTEATPVQVEVEGGVPDIEEQERRTQEVQLQVAEKV  
 KEESQLPGTGGPEDVLQPVQRAEAERPEEQAEASGLKKE TDVVLKVDAQEAKTEPFTQGVVGGTTPE  
 EKAPQVTE SIESELVTTQCAETLAGVKSQEMVMEQAIPPDSVETPTDSETDGTSPVADFADAGTTQKDE  
 IVEIHEENEVASGTQSGGTEAEAVPAQKERPPAPSSVFQEETKEQSKMEDTLEHTDKEVSVETVLSK  
 TEGTQEADQYADEKTKDVPFFEGLEGSIDTGITVSREKVEVALKGGEGTEEAECKDDELALQSHAKSPP  
 SPVEREMVVQVEREKTEAEPHVNEEKLEHETAVTVSEEVSKQLLQTVNVPIIDGAKEVSSLEGSPPPCL  
 GQEEAVCTKIQVQSSEASFTLTA AAEKVLGETANILETGETLEPAGAHLVLEEKSSKEDFAAHPGE  
 DAVPTGPDQAKSTPVI VSATTKGLSSDLEGEKTTSLKWSDEVDEQVACQEVKVSVAIEDLEPENGIL  
 ELETSSKLVQNI IQTAVDQFVRTEETATEMLTSELQTQAHVIKADSQDAGQETEKEGEEPQASQDETP  
 ITSAKEESESTAVGQAHSISKDMSESEKMTVEVEGSTVNDQQLLEEVLPSEEEGGGAGTKSVPEDDG  
 HALLAERIEKSLVEPKDEKGGDDVDPENQNSALADTDASGGLTKE SPDTNGPKQKEKEDAQEVLEQEGK  
 VHSESDKAITPQAQEELQKQERESAKSELTES

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6685\\_d03.zip](https://cdn.origene.com/chromatograms/mk6685_d03.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


- ACCN:** NM\_005100
- ORF Size:** 5346 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\\_005100.4](#)

**RefSeq Size:** 6609 bp

**RefSeq ORF:** 5349 bp

**Locus ID:** 9590

**UniProt ID:** [Q02952](#)

**Cytogenetics:** 6q25.1

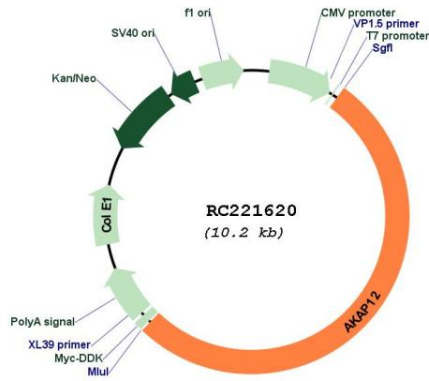
**Domains:** PkinA\_anch

**Protein Families:** Druggable Genome

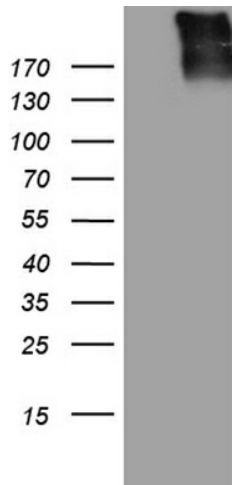
**MW:** 191.3 kDa

**Gene Summary:** The A-kinase anchor proteins (AKAPs) are a group of structurally diverse proteins, which have the common function of binding to the regulatory subunit of protein kinase A (PKA) and confining the holoenzyme to discrete locations within the cell. This gene encodes a member of the AKAP family. The encoded protein is expressed in endothelial cells, cultured fibroblasts, and osteosarcoma cells. It associates with protein kinases A and C and phosphatase, and serves as a scaffold protein in signal transduction. This protein and RII PKA colocalize at the cell periphery. This protein is a cell growth-related protein. Antibodies to this protein can be produced by patients with myasthenia gravis. Alternative splicing of this gene results in two transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]

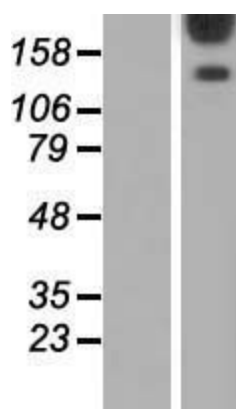
Product images:



Circular map for RC221620



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY AKAP12 (Cat# RC221620, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-AKAP12 (Cat# [TA811208])(1:2000). Positive lysates [LY417515] (100ug) and [LC417515] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY417515]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221620 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).