**OriGene Technologies, Inc.**
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

# Product datasheet for RC235301

## AKAP13 (NM_001270546) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | AKAP13 (NM_001270546) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | AKAP13 |
| **Synonyms:** | AKAP-13; AKAP-Lbc; ARHGEF13; BRX; c-lbc; HA-3; Ht31; LBC; p47; PRKA13; PROTO-LB; PROTO-LBC |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |
| **Cell Selection:** | Neomycin |
| **ORF Nucleotide Sequence:** | >RC235301 representing NM_001270546<br>Red=Cloning site Blue=ORF Green=Tags(s)<br><br>TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC<br>GCCGCGATCGCC<br><br>ATGTATGAACGGCACAAGAGGCGCTACAGCCTCTGTGACATCTCCAAGGTGGACAGGACTGTGGACGTGG<br>TATTGCTGAAGATAAACCGAGAAAACTGGTGTACAATAGAGCCATGCCCTGATGCAGCATCTCTTCTGGC<br>TTCCAAGCAGAGCCCAGAATGTGAGAACTTCCTGGATGTTGGACTGGGCAGAGAGTGTACCTCAAAACAA<br>GGTGTACTTAAAAGAGAATCTGGGAGTGATTCTGACCTCTTTCACTCACCCAGTGATGACATGGACAGCA<br>TCATCTTCCCAAAGCCAGAGGAAGAGCATTTGGCCTGTGATATCACCGGATCCAGTTCATCCACCGATGA<br>CACGGCTTCACTGGACCGACATTCTTCTCATGGCAGTGATGTGTCTCTCTCCCAGATTTTAAAGCCAAAC<br>AGGTCAAGAGATCGGCAAAGCCTTGATGGATTCTACAGCCATGGGATGGGAGCTGAGGGTCGAGAAAGTG<br>AGAGTGAGCCTGCTGACCCAGGCGACGTGGAGGAGGAGGAGATGGACAGTATCACTGAAGTGCCTGCAAA<br>CTGCTCTGTCCTAAGGAGCTCCATGCGCTCTCTTTCTCCCTTCCGGAGGCACAGCTGGGGGCCTGGGAAA<br>AATGCAGCCAGCGATGCAGAAATGAACCACCGGAGTTTCAGTCTAGAAGGCTTGACAGGAGGAGCTGGTG<br>TCGGAAACAAGCCATCCTCATCTCTAGAAGTAAGCTCTGCAAATGCCGAAGAGCTCAGACACCCATTCAG<br>TGGTGAGGAACGGGTTGACTCTTTGGTGTCACTTTCAGAAGAGGATCTGGAGTCAGACCAGAGAGAACAT<br>AGGATGTTTGATCAGCAGATATGTCACAGATCTAAGCAGCAGGGATTTAATTACTGTACATCAGCCATTT<br>CCTCTCCATTGACAAAATCCATCTCATTAATGACAATCAGCCATCCTGGATTGGACAATTCACGGCCCTT<br>CCACAGTACCTTCCACAATACCAGTGCTAATCTGACTGAGAGTATAACAGAAGAGAACTATAATTTCCTG<br>CCACATAGCCCCTCCAAGAAAGATTCTGAATGGAAGAGTGGAACAAAAGTCAGTCGTACATTCAGCTACA<br>TCAAGAATAAAATGTCTAGCAGCAAGAAGAGCAAAGAAAAGGAAAAAGAAAAAGATAAGATTAAGGAGAA<br>GGAGAAAGATTCTAAAGACAAGGAGAAAGATAAGAAGACTGTCAACGGGCACACTTTCAGTTCCATTCCT<br>GTTGTGGGTCCCATCAGCTGTAGCCAGTGTATGAAGCCCTTCACCAACAAAGATGCCTATACTTGTGCAA<br>ATTGCAGTGCTTTTGTCCACAAAGGCTGCCGAGAAAGTCTAGCCTCCTGTGCAAAGGTCAAAATGAAGCC<br>CAAAGGGAGCCTTCAGGCACATGACACATCATCACTGCCCACGGTCATTATGAGAAACAAGCCCTCACAG |



View online »

CCCAAGGAGCGTCCTCGGTCCGCAGTCCTCCTGGTGGATGAAACCGCTACCACCCCAATATTTGCCAATA
GACGATCCCAGCAGAGTGTCTCGCTCTCCAAAAGTGTCTCCATACAGAACATTACTGGAGTTGGCAATGA
TGAGAACATGTCAAACACCTGGAAATTCCTGTCTCATTCAACAGACTCACTAAATAAAATCAGCAAGGTC
AATGAGTCAACAGAATCACTTACTGATGAGGGAGTAGGTACAGACATGAATGAAGGACAACTACTGGGAG
ACTTTGAGATTGAGTCCAAACAGCTGGAAGCAGAGTCTTGGAGTCGGATAATAGACAGCAAGTTTCTAAA
ACAGCAAAAGAAAGATGTGGTCAAACGGCAAGAAGTAATATATGAGTTGATGCAGACAGAGTTTCATCAT
GTCCGCACTCTCAAGATCATGAGTGGTGTGTACAGCCAGGGGATGATGGCGGATCTGCTTTTTGAGCAGC
AGATGGTAGAAAAGCTGTTCCCCTGTTTGGATGAGCTGATCAGTATCCATAGCCAATTCTTCCAGAGGAT
TCTGGAGCGGAAGAAGGAGTCTCTGGTGGATAAAAGTGAAAAGAACTTTCTCATCAAGAGGATAGGGGAT
GTGCTTGTAAATCAGTTTTCAGGTGAGAATGCAGAACGTTTAAAGAAGACATATGGCAAGTTTTGTGGGC
AACATAACCAGTCTGTAAACTACTTCAAAGACCTTTATGCCAAGGATAAGCGTTTTCAAGCCTTTGTAAA
GAAGAAGATGAGCAGTTCAGTTGTTAGAAGGCTTGGAATTCCAGAGTGCATATTGCTTGTAACTCAGCGG
ATTACCAAGTACCCAGTTTTATTCCAAAGAATATTGCAGTGTACCAAAGACAATGAAGTGGAGCAGGAAG
ATCTAGCACAGTCCTTGAGCCTGGTGAAGGATGTGATTGGAGCTGTAGACAGCAAAGTGGCAAGTTATGA
AAAGAAAGTGCGTCTCAATGAGATTTATACAAAGACAGATAGCAAGTCAATCATGAGGATGAAGAGTGGT
CAGATGTTTGCCAAGGAAGATTTGAAACGGAAGAAGCTTGTACGTGATGGGAGTGTGTTTCTGAAGAATG
CAGCAGGAAGGTTGAAAGAGGTTCAAGCAGTTCTTCTCACTGACATTTTAGTTTTCCTTCAAGAAAAAGA
CCAGAAGTACATCTTTGCATCATTGGACCAGAAGTCAACAGTGATCTCTTTAAAGAAGCTGATTGTGAGA
GAAGTGGCACATGAGGAGAAAGGTTTATTCCTGATCAGCATGGGGATGACAGATCCAGAGATGGTAGAAG
TCCATGCCAGCTCCAAAGAGGAACGAAACAGCTGGATTCAGATCATTCAGGACACAATCAACACCCTGAA
CAGAGATGAAGATGAAGGAATTCCTAGTGAGAATGAGGAAGAAAAGAAAATGTTGGACACCAGAGCCCGA
GAATTAAAAGAACAACTTCACCAGAAGGACCAAAAAATCCTACTCTTGTTGGAAGAGAAGGAGATGATTT
TCCGGGACATGGCTGAGTGCAGCACCCCTCTCCCAGAGGATTGCTCCCCAACACATAGCCCTAGAGTTCT
CTTCCGCTCCAACACAGAAGAGGCTCTCAAAGGAGGACCTTTAATGAAAAGTGCAATAAATGAGGTGGAG
ATCCTTCAGGGTTTGGTGAGTGGAAATCTGGGAGGCACACTTGGGCCGACTGTCAGCAGCCCCATTGAGC
AAGATGTGGTCGGTCCCGTTTCCCTGCCCCGGAGAGCAGAGACCTTTGGAGGATTTGACAGCCATCAGAT
GAATGCTTCAAAAGGAGGCGAGAAGGAAGAGGGAGATGATGGCCAAGATCTTAGGAGAACGGAATCAGAT
AGTGGCCTAAAAAAGGGTGGAAATGCTAACCTGGTATTTATGCTTAAAAGAAACAGTGAGCAGGTTGTCC
AGAGCGTTGTTCATCTCTACGAGCTCCTCAGCGCTCTGCAGGGTGTGGTGCTGCAGCAGGACAGCTACAT
TGAGGACCAGAAACTGGTGCTGAGCGAGAGGGCGCTCACTCGCAGCTTGTCCCGCCCGAGCTCCCTCATT
GAGCAGGAGAAGCAGCGCAGCCTGGAGAAGCAGCGCCAGGACCTGGCCAACCTGCAGAAGCAGCAGGCCC
AGTACCTCGAGGAGAAGCGCAGGCGCGAGCGTGAGTGGGAAGCTCGTGAGAGGGAGCTGCGGGAGCGGGA
GGCCCTCCTGGCCCAGCGCGAGGAGGAGGTGCAGCAGGGGCAGCAGGACCTGGAAAAGGAGCGGGAGGAG
CTCCAGCAGAAGAAGGGCACATACCAGTATGACCTGGAGCGACTGCGTGCTGCCCAGAAACAGCTTGAGA
GGGAACAGGAGCAGCTGCGCCGGGAGGCAGAGCGGCTCAGCCAGCGGCAGACAGAACGGGACCTGTGTCA
GGTTTCCCATCCACATACCAAGCTGATGAGGATCCCATCGTTCTTCCCCAGTCCTGAGGAGCCCCCCTCG
CCATCTGCACCTTCCATAGCCAAATCAGGGTCATTGGACTCAGAACTTTCAGTGTCCCCAAAAAGGAACA
GCATCTCTCGGACACACAAAGATAAGGGGCCTTTTCACATACTGAGTTCAACCAGCCAGACAAACAAAGG
ACCAGAAGGGCAGAGCCAGGCCCCTGCGTCCACCTCTGCCTCTACCCGCCTGTTTGGGTTAACAAAGCCA
AAGGAAAAGAAGGAGAAAAAAAAGAAGAACAAAACCAGCCGCTCTCAGCCCGGTGATGGTCCCGCGTCAG
AAGTATCAGCAGAGGGTGAAGAGATCTTCTGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

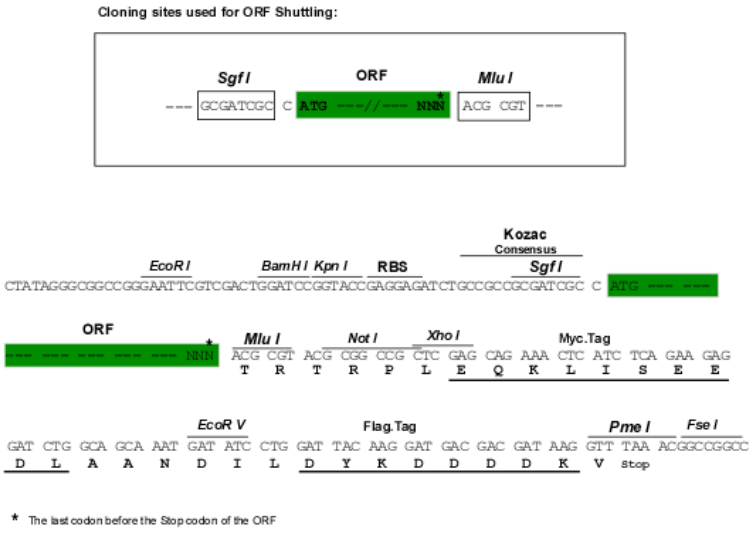
>RC235301 representing NM_001270546
Red=Cloning site Green=Tags(s)

MYERHKRRYSLCDISKVDRTVDVVLLKINRENWCTIEPCPDAASLLASKQSPECENFLDVGLGRECTSKQ
GVLKRESGSDSDLFHSPSDDMDSIIFPKPEEEHLACDITGSSSSTDDTASLDRHSSHGSDVSLSQILKPN
RSRDRQSLDGFYSHGMGAEGRESESEPADPGDVEEEEMDSITEVPANCSVLRSSMRSLSPFRRHSWGPGK
NAASDAEMNHRSFSLEGLTGGAGVGNKPSSSLEVSSANAEELRHPFSGEERVDSLVSLSEEDLESDQREH
RMFDQQICHRSKQQGFNYCTSAISSPLTKSISLMTISHPGLDNSRPFHSTFHNTSANLTESITEENYNFL
PHSPSKKDSEWKSGTKVSRTFSYIKNKMSSSKKSKEKEKEKDKIKEKEKDSKDKEKDKKTVNGHTFSSIP
VVGPISCSQCMKPFTNKDAYTCANCSAFVHKGCRESLASCAKVKMKPKGSLQAHDTSSLPTVIMRNKPSQ
PKERPRSAVLLVDETATTPIFANRRSQQSVSLSKSVSIQNITGVGNDENMSNTWKFLSHSTDSLNKISKV
NESTESLTDEGVGTDMNEGQLLGDFEIESKQLEAESWSRIIDSKFLKQQKKDVVKRQEVIYELMQTEFHH
VRTLKIMSGVYSQGMMADLLFEQQMVEKLFPCLDELISIHSQFFQRILERKKESLVDKSEKNFLIKRIGD
VLVNQFSGENAERLKKTYGKFCGQHNQSVNYFKDLYAKDKRFQAFVKKKMSSSVVRRLGIPECILLVTQR
ITKYPVLFQRILQCTKDNEVEQEDLAQSLSLVKDVIGAVDSKVASYEKKVRLNEIYTKTDSKSIMRMKSG
QMFAKEDLKRKKLVRDGSVFLKNAAGRLKEVQAVLLTDILVFLQEKDQKYIFASLDQKSTVISLKKLIVR
EVAHEEKGLFLISMGMTDPEMVEVHASSKEERNSWIQIIQDTINTLNRDEDEGIPSENEEEKKMLDTRAR
ELKEQLHQKDQKILLLLEEKEMIFRDMAECSTPLPEDCSPTHSPRVLFRSNTEEALKGGPLMKSAINEVE
ILQGLVSGNLGGTLGPTVSSPIEQDVVGPVSLPRRAETFGGFDSHQMNASKGGEKEEGDDGQDLRRTESD
SGLKKGGNANLVFMLKRNSEQVVQSVVHLYELLSALQGVVLQQDSYIEDQKLVLSERALTRSLSRPSSLI
EQEKQRSLEKQRQDLANLQKQQAQYLEEKRRREREWEARERELRREALLAQREEEVQQGQQDLEKEREE
LQQKKGTYQYDLERLRAAQKQLEREQEQLRREAERLSQRQTERDLCQVSHPHTKLMRIPSFFPSPEEPPS
PSAPSIAKSGSLDSELSVSPKRNSISRTHKDKGPFHILSSTSQTNKGPEGQSQAPASTSASTRLFGLTKP
KEKKEKKKKNKTSRSQPGDGPASEVSAEGEEIFC

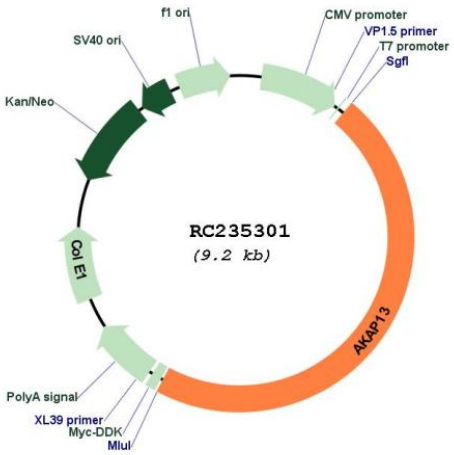
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



Plasmid Map:




| | |
|---|---|
| **ACCN:** | NM_001270546 |
| **ORF Size:** | 4302 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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_001270546.1, NP_001257475.1 |
| **RefSeq Size:** | 9146 bp |
| **RefSeq ORF:** | 4305 bp |
| **Locus ID:** | 11214 |
| **UniProt ID:** | Q12802 |
| **Cytogenetics:** | 15q25.3 |
| **Protein Families:** | Druggable Genome |
| **MW:** | 162.3 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. Alternative splicing of this gene results in multiple transcript variants encoding different isoforms containing c-terminal dbl oncogene homology (DH) and pleckstrin homology (PH) domains. The DH domain is associated with guanine nucleotide exchange activation for the Rho/Rac family of small GTP binding proteins, resulting in the conversion of the inactive GTPase to the active form capable of transducing signals. The PH domain has multiple functions. Therefore, these isoforms function as scaffolding proteins to coordinate a Rho signaling pathway, function as protein kinase A-anchoring proteins and, in addition, enhance ligand-dependent activity of estrogen receptors alpha and beta. [provided by RefSeq, Jul 2012] |