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Product datasheet for SC323610

CDC42 binding protein kinase alpha (CDC42BPA) (NM_014826) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDC42 binding protein kinase alpha (CDC42BPA) (NM_014826) Human Untagged Clone
Tag:	Tag Free
Symbol:	CDC42 binding protein kinase alpha
Synonyms:	MRCK; MRCKA; PK428
Mammalian Cell Selection:	None
Vector:	pCMV6-XL6
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC323610 sequence for NM_014826 edited (data generated by NextGen Sequencing)

ATGTCTGGAGAAGTGCGTTTGAGGCAGTTGGAGCAGTTTATTTTGGACGGGCCCGCTCAG
ACCAATGGGCAGTGCTTCAGTGTGGAGACGTTACTGGATATACTCATCTGCCTTTATGAT
GAATGCAATAATTCTCCATTGAGAAGAGAGAAGAACATTCTCGAATACCTAGAATGGGCT
AAACCATTTACTTCTAAAGTGAAACAAATGCGATTACATAGAGAAGACTTTGAAATATTA
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AAAGTGTTTGCCATGAAAATATTGAATAAATGGGAAATGCTGAAAAGAGCTGAGACAGCA
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CACTATGCTTTCCAGGATGACAATAACTTATACCTGGTTATGGATTATTATGTTGGTGGG
GATTTGCTTACTCTACTCAGCAAATTTGAAGATAGATTGCCTGAAGATATGGCTAGATTT
TACTTGGCTGAGATGGTGATAGCAATTGACTCAGTTCATCAGCTACATTATGTACACAGA
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CCATTTTATGCAGAATCGCTGGTGGAGACATACGGAAAAATCATGAACCACAAAGAGAGG
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CTCATTTGTAGCAGAGAACATCGACTTGGTCAAAATGGAATAGAAGACTTTAAGAAACAC
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GGTTTTACATATACTAGTAGCTGTGTACTTTCTGATCGGAGCTGTTTAAGAGTTACGGCT
GGTCCCACCTCACTGGATCTTGATGTTAATGTTCAGAGGACTCTAGACAACAACTTAGCA
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AAACTTCAAGAGTCAACACAGACTGTCCAAGCTCTGCAGTATTCAACTGTTGATGGTCCA
CTAACAGCAAGCAAAGATTTAGAAATAAAAAACTTAAAAGAAGAAATTGAAAAACTAAGA

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AAACAAGTAACAGAATCAAGTCATTTGGAACAGCAACTTGAAGAAGCTAATGCTGTGAGG
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CAACAAGAAAGAGAAGATCTAAATAAGCTGGAAGTTCATACAGAAGCTCTAGCTGCTGAA
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GTTAGAAACATTAACAATAAGCGGCGTTATTCCTTCAGAGTCCCAGAAGAGGAAAGGATG
CAGCAGAGGAGGGAAATGCTACGAGATCCAGAAATGAGAAATAAATTAATTTCTAATCCA
ACTAATTTTAATCACATAGCACACATGGGTCCTGGAGATGGAATACAGATCCTGAAAGAT
CTGCCCATGAACCCTCGGCCTCAGGAAAGTCGGACAGTATTCAGTGGCTCAGTCAGTATT
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TCAGCAAGGTCATCCGCACAGAATGGCAGCGCATTAAAGAGGGAATTCTCTGGAGGAAGC
TACAGTGCCAAGCGGCAGCCCATGCCCTCCCCGTCAGAGGGCTCTTTGTCCTCCGGAGGC
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AGGCATTCCACAGCTTCCAACAGTTCCAACCTAAGCAGCCCCCCAAGCCCAGTTTCACCC
CGAAAAACCAAGAGCCTCTCCCTGGAGAGCACTGACCGCGGGAGCTGGGACCCGTGA

Clone variation with respect to NM_014826.4
90 a=>g;3667 g=>a;3780 a=>g;4734 t=>c;4853 c=>t

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_014826 unedited
TCCGTCCCGTCTGAGCAACGGGCGGTTGGCGCTGTACTGGCTGGGAGGTCTATATAAGCAGAGCTCGTTT
AGTGAACCGTCAGAATCTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGGAAAATGA
AGAGTTTTCACCGGAATCCGTTGAAAATAGGACCGACCGCAAAGCCTTAAAGAAAGAAGGACCTCGGGAG
GAGAAACGAAAAGCCGCCTCCGGGCAAGACTTGGCGTGCTCCGAGCCGAGGGGCTGCTTTCAGGGACCTC
GCCCCCCTCCCTTTCCTGCTGGAGAAAATTGCCGCTGATGCATTATCCAAGTGGTGGGTTGGGGAGGGAT
TTTGCAGCAACATTTTTTGTTTTTCCCCTCCCCCCTTCTATGCATTTCTGTTTTTTTTCCCTCCCCTTTC
TTGTTTTTCTTTCTCCCGGGAAAGTGAATTGCTGATGCAATCGGGACTTTTATTTCATTATGGATGCACC
CGGATTGGATCAGGATACGTGGAACAATTTGAATTTGGATTGAAGGAGAAAAGTTTTTTTTTTTAAAAAA
GTGGTGACCCCAAGTCCGTTGAACTTTAATATATATTTAATTAAAATATCACACTTATTGATTTCTTTAA
AATGCTATAGATATATTTTTATGGTATTTACCCTCAAATAATGTATTGGGTTAAATGAAAACGCTCAGTT
AGTGAGGTACTGGTGTGTTGATGTTAATTCACACCGCATGCTGACGTGTTGATACCAAGGTATTTAAACA
CCTGACTAGTCCAATGTAAGTCCTATATAGAACCGAATCGGCACGCTCGGAATGCTTGACTGACATATGA
AGCGCGTACTGACGCTATGGACTTCGATACCAGCTAA

Kinase Domain Sequence:

>SC323610 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI refernce protein database, you can confirm the presence of the kinase-deficient mutation
TKCATTTAAGGTGATTGGTCGAGGAGCTTTTGGGGAGGTTGCTGTAGTAAAACTAAAAAATGCMGATAAA
GTGTTTGCCATGATGATATTGAATAAATGGGAAATGCTGAAAAGAGCTGAGACAGCATGTTTTCGTGAAG
AAAGGGATGTATTAGTGAATGGAGACAATAAATGGATTACAACCTTGCACTATGCTTTCCAGGATGACAA
TAACTTATACCTGGTTATGGATTATTATGTTGGTGGGGATTTGCT

Restriction Sites: Please inquire

ACCN: NM_014826

Insert Size: 6200 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).

OTI Annotation: This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell. 2008 May p536-548.

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_014826.3, NP_055641.3
RefSeq Size:	7776 bp
RefSeq ORF:	4917 bp
Locus ID:	8476
UniProt ID:	Q5VT25
Cytogenetics:	1q42.13
Protein Families:	Druggable Genome, Protein Kinase
Gene Summary:	The protein encoded by this gene is a member of the serine/threonine protein kinase family. This kinase contains multiple functional domains. Its kinase domain is highly similar to that of the myotonic dystrophy protein kinase (DMPK). This kinase also contains a Rac interactive binding (CRIB) domain, and has been shown to bind CDC42. It may function as a CDC42 downstream effector mediating CDC42 induced peripheral actin formation, and promoting cytoskeletal reorganization. Multiple alternatively spliced transcript variants have been described. [provided by RefSeq, Sep 2018] Transcript Variant: This variant (A) lacks a coding segment compared to variant B, resulting in an isoform (A) that lacks an internal region, as compared to isoform B.