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Product datasheet for SC323674

ASK1 (MAP3K5) (NM_005923) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ASK1 (MAP3K5) (NM_005923) Human Untagged Clone
Tag:	Tag Free
Symbol:	ASK1
Synonyms:	ASK1; MAPKKK5; MEKK5
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC323674 sequence for NM_005923 edited (data generated by NextGen Sequencing)

ATGAGCACGGAGGCGGACGAGGGCATCACTTTCTCTGTGCCACCCTTCGCCCCCTCGGGC
TTCTGCACCATCCCCGAGGGCGGCATCTGCAGGAGGGGAGGAGCGGCGGCGGTGGGCGAG
GGCGAGGAGCACCAGCTGCCACCGCCGCCGCCGGGCAGCTTCTGGAACGTGGAGAGCGCC
GCTGCCCCTGGCATCGGTTGTCCGGCGGCCACCTCCTCGAGCAGTGCCACCCGAGGCCGG
GGCAGCTCTGTTGGCGGGGGCAGCCGACGGACCACGGTGGCATATGTGATCAACGAAGCG
AGCCAAGGGCAACTGGTGGTGGCCGAGAGCGAGGCCCTGCAGAGCTTGCGGGAGGCGTGC
GAGACAGTGGGCGCCACCCTGGAAACCCTGCATTTTGGGAAACTCGACTTTGGAGAAACC
ACCGTGCTGGACCGCTTTTACAATGCAGATATTGCGGTGGTGGAGATGAGCGATGCCTTC
CGGCAGCCGTCCTTGTTTTACCACCTTGGGGTGAGAGAAAGTTTCAGCATGGCCAACAAC
ATCATCCTCTACTGTGATACTAACTCGGACTCTCTGCAGTCACTGAAGGAAATAATTTGC
CAGAAGAATACTATGTGCACTGGGAACTACACCTTTGTTCCTTACATGATAACTCCACAT
AACAAAGTCTACTGCTGTGACAGCAGCTTCATGAAGGGGTTGACAGAGCTCATGCAACCG
AACTTCGAGCTGCTTCTTGGACCCATCTGCTTACCTCTTGTGGATCGTTTTATTCAACTT
TTGAAGGTGGCACAAGCAAGTTCTAGCCAGTACTTCCGGGAATCTATACTCAATGACATC
AGGAAAGCTCGTAATTTATACACTGGTAAAGAATTGGCAGCTGAGTTGGCAAGAATTCGG
CAGCGAGTAGATAATATCGAAGTCTTGACAGCAGATATTGTCATAAATCTGTTACTTTCC
TACAGAGATATCCAGGACTATGATTCTATTGTGAAGCTGGTAGAGACTTTAGAAAAACTG
CCAACCTTTGATTTGGCCTCCCATCACCATGTGAAGTTTCATTATGCATTTGCACTGAAT
AGGAGAAATCTCCCTGGTGACAGAGCAAAAGCTCTTGATATTATGATTCCCATGGTGCAA
AGCGAAGGACAAGTTGCTTCAGATATGTATTGCCTAGTTGGTCGAATCTACAAAGATATG
TTTTTGGACTCTAATTTCACGGACACTGAAAGCAGAGACCATGGAGCTTCTTGGTTCAAA
AAGGCATTTGAATCTGAGCCAACACTACAGTCAGGAATTAATTATGCGGTCCTCCTCCTG
GCAGCTGGACACCAGTTTGAATCTTCCTTTGAGCTCCGGAAAGTTGGGGTGAAGCTAAGT
AGTCTTCTTGGTAAAAAGGGAAACTTGGAAAAACTCCAGAGCTACTGGGAAGTTGGATTT
TTTCTGGGGGCCAGCGTCCTAGCCAATGACCACATGAGAGTCATTCAAGCATCTGAAAAG

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CTTTTTAAACTGAAGACACCAGCATGGTACCTCAAGTCTATTGTAGAGACAATTTTGATA
TATAAGCATTTTGTGAAACTGACCACAGAACAGCCTGTGGCCAAGCAAGAACTTGTGGAC
TTTTGGATGGATTTCCTGGTCGAGGCCACAAAGACAGATGTTACTGTGGTTAGGTTTCCA
GTATTAATATTAGAACCAACCAAAATCTATCAACCTTCTTATTTGTCTATCAACAATGAA
GTTGAGGAAAAGACAATCTCTATTTGGCACGTGCTTCCTGATGACAAGAAAGGTATACAT
GAGTGGAATTTTAGTGCCTCTTCTGTCAGGGGAGTGAGTATTTCTAAATTTGAAGAAAGA
TGCTGCTTTCTTTATGTGCTTCACAATTCTGATGATTTCCAAATCTATTTCTGTACAGAA
CTTCATTGTAAAAAGTTTTTTGAGATGGTGAACACCATTACCGAAGAGAAGGGGAGAAGC
ACAGAGGAAGGAGACTGTGAAAGTGACTTGCTGGAGTATGACTATGAATATGATGAAAAT
GGTGACAGAGTCGTTTTAGGAAAAGGCACTTATGGGATAGTCTACGCAGGTCGGGACTTG
AGCAACCAAGTCAGAATTGCTATTATGGAAATCCCAGAGAGAGACAGCAGATACTCTCAG
CCCCTGCATGAAGAAATAGCATTGCATAAACACCTGAAGCACAAAAATATTGTCCAGTAT
CTGGGCTCTTTCAGTGAGAATGGTTTCATTAAAATCTTCATGGAGCAGGTCCCTGGAGGA
AGTCTTTCTGCTCTCCTTCGTTCCAAATGGGGTCCATTAAAAGACAATGAGCAAACAATT
GGCTTTTATACAAAGCAAATACTGGAAGGATTAAAATATCTCCATGACAATCAGATAGTT
CACCGGGACATAAAGGGTGACAATGTGTTGATTAATACCTACAGTGGTGTTCTCAAGATC
TCTGACTTCGGAACATCAAAGAGGCTTGCTGGCATAAACCCCTGTACTGAAACTTTTACT
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TTTTATGAACTGGGAGAACCACAAGCAGCTATGTTCAAGGTGGGAATGTTTAAAGTCCAC
CCTGAGATCCCAGAGTCCATGTCTGCAGAGGCCAAGGCATTCATACTGAAATGTTTTGAA
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TCAAGCAAAAAGAAAAAGACACAACCTAAGCTTTCAGCTCTTTCAGCTGGATCAAATGAA
TATCTCAGGAGTATATCCTTGCCGGTACCTGTGCTGGTGGAGGACACCAGCAGCAGCAGT
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AGAGCCAAGTCCTGCGGAGAAAGAGATGTCAAGGGAATTCGGACACTCTTTTTGGGCATT
CCAGATGAGAATTTTGAAGATCACAGTGCTCCTCCTTCCCCTGAAGAAAAAGATTCTGGA
TTCTTCATGCTGAGGAAGGACAGTGAGAGGCGAGCTACCCTTCACAGGATCCTGACGGAA
GACCAAGACAAAATTGTGAGAAACCTAATGGAATCTTTAGCTCAGGGGGCTGAAGAACCG
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AGCCATGGCATTAGCCAAGTCCAGGTGGTACTCTTTGGTTTTCAAGATGCTGTCAATAAA
GTTCTTCGGAATCATAACATCAAGCCGCACTGGATGTTTGCCTTAGACAGTATCATTCGG
AAGGCGGTACAGACAGCCATTACCATCCTGGTTCCAGAACTAAGGCCACATTTCAGCCTT
GCATCTGAGAGTGATACTGCTGATCAAGAAGACTTGGATGTAGAAGATGACCATGAGGAA
CAGCCTTCAAATCAAACTGTCCGAAGACCTCAGGCTGTCATTGAAGATGCTGTGGCTACC
TCAGGCGTGAGCACGCTCAGTTCTACTGTGTCTCATGATTCCCAGAGTGCTCACCGGTCA
CTGAATGTACAGCTTGGAAGGATGAAAATAGAAACCAATAGATTACTGGAAGAATTGGTT
CGGAAAGAGAAAGAATTACAAGCACTCCTTCATCGAGCTATTGAAGAAAAAGACCAAGAA
ATTAAACACCTGAAGCTTAAGTCCCAACCCATAGAAATTCCTGAATTGCCTGTATTTCAT
CTAAATTCTTCTGGCACAAATACTGAAGATTCTGAACTTACCGACTGGCTGAGAGTGAAT
GGAGCTGATGAAGACACTATAAGCCGGTTTTTGGCTGAAGATTATACACTATTGGATGTT
CTCTACTATGTTACACGTGATGACTTAAAATGCTTGAGACTAAGGGGAGGGATGCTGTGC
ACACTGTGGAAGGCTATCATTGACTTTCGAAACAAACAGACTTGA

Clone variation with respect to NM_005923.3
1557 a=>g;2126 a=>t

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_005923 unedited
ACCGCCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGA
ACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACCAGGCGCGGCGGGTGGC
GAGGGCGGGCTGCACCCCGAGCGCGGCGCCCTTGAGCTGCACCGCGGCGCAGGTTTGCGAGCCGACTTGT
CAGCCGGCCAAGAAAAGGAAGCTCCGTCCCTTCCCGCTCACCCGGCTTCCCCACCCCTTGTACTCTAAAC
TCTGCAGAGGGCGAGCGGCGCGGCCACGGAGGCGCCGAGGAGGAGCGAGCCGCCGCCGGGCAGCGGCTGT
GCCCTCGGGGGAGAGGGCGCCGGAGAGGAGGCGGCGGCGCGGCGGCGAGGGCGCGGCGCGCGATGGCAGC
TGCTTAGCCCGGGCGGGCGCCGGAGCAGCCCCCGAGCTGGTGCCTGGCCAGGCGGTGCGGCTGGGGCGGG
GGGACGCCCGCCGCCGTTGCTGCCCGCCCCGGAAAGATGAACACGGGAGGCGGCCGAGGGCATCACTTTC
TTGGGCCACCCTTCGCCCCCTGGGCCTTCTGCCCATCCCGAAGGGCGGATCGCCGGAAGGGGAGGGAC

Kinase Domain Sequence:

>SC323674 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
TGMTGMAGAGTCGTTTTAGGAAAGGCACTTATGGGATAGTCTACGCAGGTCGGGACTTGAGCYWYYWAGT
CAGAATTGCTATTATGGAAATCCCAGAGAGAGACAGCAGATACTCTCAGCCCCTGCATGAAGAAATAGCA
TTGCATAAACACCTGAAGCACAAAAATATTGTCCAGTATCTGGGCTCTTTCAGTGAGAATGGTTTCATTA
AAATCTTCATGGAGCAGGTCCCTGGAGGAAGTCTTTCTGCTCTCC

Restriction Sites: Please inquire

ACCN: NM_005923

Insert Size: 4700 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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 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_005923.3, NP_005914.1
RefSeq Size:	5215 bp
RefSeq ORF:	4125 bp
Locus ID:	4217
UniProt ID:	Q99683
Cytogenetics:	6q23.3
Domains:	pkinase, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Amyotrophic lateral sclerosis (ALS), MAPK signaling pathway, Neurotrophin signaling pathway
Gene Summary:	Mitogen-activated protein kinase (MAPK) signaling cascades include MAPK or extracellular signal-regulated kinase (ERK), MAPK kinase (MKK or MEK), and MAPK kinase kinase (MAPKKK or MEKK). MAPKK kinase/MEKK phosphorylates and activates its downstream protein kinase, MAPK kinase/MEK, which in turn activates MAPK. The kinases of these signaling cascades are highly conserved, and homologs exist in yeast, Drosophila, and mammalian cells. MAPKKK5 contains 1,374 amino acids with all 11 kinase subdomains. Northern blot analysis shows that MAPKKK5 transcript is abundantly expressed in human heart and pancreas. The MAPKKK5 protein phosphorylates and activates MKK4 (aliases SERK1, MAPKK4) in vitro, and activates c-Jun N-terminal kinase (JNK)/stress-activated protein kinase (SAPK) during transient expression in COS and 293 cells; MAPKKK5 does not activate MAPK/ERK. [provided by RefSeq, Jul 2008]