

Product datasheet for **MR207806**

Stk4 (NM_021420) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Stk4 (NM_021420) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Stk4
Synonyms:	AI447339; AU020804; Kas-2; Mst1; Ysk3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR207806 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGAGACCGTGCAGCTGAGGAACCCACCGCGCAGGCAGCTGAAAAAGTTGGATGAAGATAGTTAACCA
 AGCAGCCCGAGGAAGTGTGGTGTCTTAGAGAAGCTTGAGAGGGGTCTTATGGCAGCGTGACAAGGC
 TATTCATAAAGAGACTGGCCAGATTGTTGCAATCAAGCAAGTGCCCGTGAATCGGACCTGCAGGAGATA
 ATCAAGGAAATCTCCATCATGCAGCAGTGTGATAGCCCTCACGTAGTCAAGTATTATGGCAGCTACTTTA
 AGAACACAGACCTGTGGATTGTTATGGAGTACTGTGGGCTGTTCTGTATCTGATATCATTGCGCTACG
 GAACAAGACGTTAACAGAAGATGAAATAGCTACAATATTACAATCAACTCTTAAGGGACTAGAATACCTT
 CATTTTATGAGAAAAATACACCGAGATATCAAGGCGGGAATATTTTGTAAACACAGAAGGCCATGCAA
 AGCTTGCAGACTTTGGAGTCGCAGGTCACTTACAGATACCATGGCAAAGAGGAATACAGTAATAGGGAC
 CCCGTTTTGGATGGCTCCTGAAGTTATTCAGGAAATGGGTACAACCTGTGTGGCAGACATCTGGTCTCTG
 GGAATAACTGCCATAGAAATGGCTGAAGGAAAGCCCCATATGCTGATATCCATCCAATGAGGGCAATAT
 TCATGATTCCTACAAACCTCCTCCACATTCCGTAAGCCAGAGCTGTGGTCAGACAACCTCATGGATT
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 CGGCACGATGGTTCGAGCTGCCGGTGTAGATGGGCACTGTCCGAGTAGCCAGCACGATGAGCGGAGGA
 GCCAATACTATGATTGAGCACGGTGACACGTTGCCGTCCCAGCTGGGCACCATGGTGATCAACACGGAGG
 ACGAGGAAGAGGAAGCAACATGAAAAGAAGAGATGAGACCATGCAGCCTGCAAAAACCGCTTTCCCTTGA
 ATACTTTGAACAAAAAGAAAAGGAAAATCAGATCAACAGCTTTGGCAAGAATGTATCTGGCTCTCTGAAG
 AATTTCTCCGATTGAAAAATCCCTCAGGATGGAGACTATGAGTTTCTCAAGAGCTGGACTGTGGAGGACC
 TTCAGAAGAGGCTCTTGCCCTCGACCCATGATGGAACAGGAAATGGAAGAGATCCGGCAGAAGTACCG
 GTCCAAGCGGCAGCCAATCCTGGATGCCATTGAAGCCAAGAAGAGGAGGCAACAGAACTTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR207806 protein sequence
 Red=Cloning site Green=Tags(s)

METVQLRNPPRRQLKKLDEDSLTKQPEEVFDVLEKLGESYGSVYKAIHKETGQIVAIKQVPVESDLQEI
 IKEISIMQQCDSPHVVKYYGSYFKNTDLWIVMEYCGAGSVSDIIRLRNKTLEDEIATILQSTLKGLEYL
 HFMRKIHRDIKAGNILLNTEGHAKLADFGVAGQLTDTMAKRNTVIGTPFWMAPEVIQEIYNCVADIWSL
 GITAIEMAEGKPPYADIHPMRAIFMIPTNPPPTFRKPELWSDNFMDFVKQCLVKSPEQRATATQLLQHPF
 YKSAKGVSIIRDLINEAMDVCLKRQEAQREVDQDDEENSEEDEMDSGTMVRAAGDEMGTVRVASTMSGG
 ANTMIEHGDTLPSQLGTMVINTEDEEEEGTMKRRDETMQPAKPSFLEYFEQKEKENQINSFGKNVSGSLK
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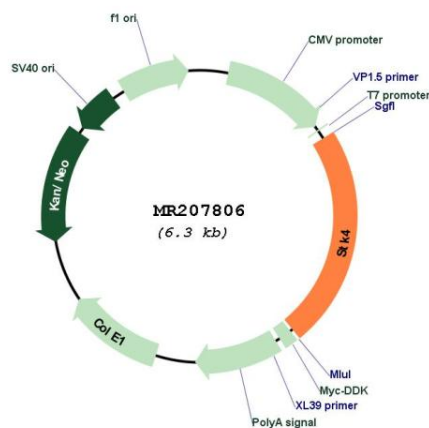
TRTRPLEQ**KL**ISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cytogenetics:	2 H3
MW:	55.5 kDa
Gene Summary:	<p>Stress-activated, pro-apoptotic kinase which, following caspase-cleavage, enters the nucleus and induces chromatin condensation followed by internucleosomal DNA fragmentation. Key component of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. The core of this pathway is composed of a kinase cascade wherein STK3/MST2 and STK4/MST1, in complex with its regulatory protein SAV1, phosphorylates and activates LATS1/2 in complex with its regulatory protein MOB1, which in turn phosphorylates and inactivates YAP1 oncoprotein and WWTR1/TAZ. Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. STK3/MST2 and STK4/MST1 are required to repress proliferation of mature hepatocytes, to prevent activation of facultative adult liver stem cells (oval cells), and to inhibit tumor formation. Phosphorylates 'Ser-14' of histone H2B (H2BS14ph) during apoptosis. Phosphorylates FOXO3 upon oxidative stress, which results in its nuclear translocation and cell death initiation. Phosphorylates MOBKL1A, MOBKL1B and RASSF2. Phosphorylates TNNI3 (cardiac Tn-I) and alters its binding affinity to TNNC1 (cardiac Tn-C) and TNNT2 (cardiac Tn-T). Phosphorylates FOXO1 on 'Ser-212' and regulates its activation and stimulates transcription of PMAIP1 in a FOXO1-dependent manner. Phosphorylates SIRT1 and inhibits SIRT1-mediated p53/TP53 deacetylation, thereby promoting p53/TP53 dependent transcription and apoptosis upon DNA damage. Acts as an inhibitor of PKB/AKT1. Phosphorylates AR on 'Ser-650' and suppresses its activity by intersecting with PKB/AKT1 signaling and antagonizing formation of AR-chromatin complexes (By similarity).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR207806