

Product datasheet for **MC203417**

Mapkapk2 (NM_008551) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mapkapk2 (NM_008551) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Mapkapk2
Synonyms:	AA960234; MAPKAP-K2; MK-2; MK2; Rps6kc1
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >BC063064
 CGCGAGTCGCCGGGACCCATGCTGTCGGGCTCTCCGGGCCAGACTCCGCCGGCGCCTTTCCCCAGCCCTC
 CACCGCCAGCCCCGGCCAGCCGCCGCCCGTTCCCCAGTTCCACGTCAAGTCGGGCCTGCAGATCCG
 AAAGAACGCCATCACCGACGACTACAAGTCCACAGCCAAGTGTGGCCTGGGCATCAACGGGAAGGTG
 CTGCGGATCTTCGACAAGAGAACCCAGCAAAAATTCGCCCTAAAGATGCTCCAGGACTGTCCGAAGGCG
 GCAGAGAGGTGGAGCTGCACTGGAGGGCCTCCAGTGGCCACACATTGTGCACATCGTGGATGTCTATGA
 GAACCTGTATGCCGGGAGGAAGTGCCTGATTGTCATGGAGTGTCTCGATGGTGGAGAGCTCTTTAGT
 CGAATCCAGGACCGAGGAGACCAGGCATTACAGAAAAGAGAGGCGTCAGAGATCATGAAGAGCATCGGCG
 AGGCCATCCAGTACCTGCACTCGATCAACATTGCTCACCGGGATGTCAAGCCTGAGAACCCTTATATAC
 TTCCAAAAGGCCAATGCCATTTTGAACTCACTGATTTTGGCTTTGCCAAGGAAACCACAGTCACAAC
 TCTTTGACCCTCGTGTATACACCATACTATGTGGCTCCGGAAGTCTGGGCCGGAGAAGTATGACA
 AGTCTGTGACATGTGGTCTTGGGTGTCATGTATATTTTGTGTGGTATCCCCCTTCTATTC
 CAATCACGGCCTTGCCATCTCTCCGGGCATGAAGACTCGTATTGGAATGGCCAGTATGAATTCCTAAC
 CCGGAGTGGTCAAGATATCAGAAGAAGTGAAGATGCTTATCCGGAATCTGCTAAAAACAGAGCCACCC
 AGAGAATGACCATCACAGAATTCATGAACCACCCTGGATCATGCAATCTACGAAGTCCCTCAGACTCC
 ACTGCACACCAGCCGTGCTGTAAGGAGGACAAGGAACGATGGGAGGATGTCAAGGAGGAGATGACCAGT
 GCCTTGGCCACGATGCGTGTGACTATGAGCAGATCAAGATAAAGAAGATAGAAGACGCATCCAACCCCTC
 TGCTTCTCAAGAGGCGGAAGAAAGCTCGTGTGTGGAGGATGCGGCTCTCGCCACTGAGCCGCTGTGC
 TCCCAACCACTGGAGGACAAGCAATAACTCTACATGAATATATTTTTAGACAAAAGACACAAGTTGCC
 CAATGCTGCCTCTGTTCTTTGGGCTGCGTGGCGCCAGAAATGCCCTCCGGCTTATTCTGCCCTTGGC
 TCTGGCTCCCCGAGGTGGGGCTGGAGGATGTGTGAGGGGAAGGTGCTCCTGAGCCGTTGTCTCTTT
 GCATTTTATCTGTAATTTGGCGTAGAGTTTTATGGAACCTGTCTTCTTGCCTTTTCCCACTCCTCAC
 TCCTTCCCAAGTCCCTTCCCATCTACAAGGCTGAGGCTTATCCACAGGTGTTGTGGAAGTTGTTATAG
 GGAAAGTCCCTAGGTTGCCCTATCTGTCTCTGCTGCTGCCCTCCCACTGTAACGTGGGGTCTCACTGGCTCT
 AGAATCTGGGAGTTCCAGGGAGAAGGCAGCAGAGTGGCAGTAGGTGGCCCTTGCCTCCCGCTGAAGCCCT
 TAGACATCACAGTGTGCACAACAGAGCAGCACATGTGTGTGCATGTGTGTATGCCTGGATCCATGCC
 AGCGACTGGGCATTGGAGGGTCTAGGGAAGGCGGGGCTACAGGGACTCCTGCTTGAACAGCCTGCCTA
 AATGCCTAGGTAGCTTGTCTAGATCCAGAGCCAGGTAATTGTGGCCTCTGTGTTAGCTGGCAGGGGAGG
 CAGTGAGGGGTTGGGGGCACTGACAGCCATCAGGAGGACTGGTCCCCTCAGGACCCCTTCCCTGCTG
 GTCCCAGATCCCTGAGGCACTGATCTACTGAGTAGCCTCTGCTTGCCTTCTTGCACGATTAACCCACT
 CTTGTCGAGTTCTCTGAAATTTTAGCCATTTCTCAATGGGCTGTCCACTCCCACGGTGAGCCTGGGAAG
 GTTCTATGCCTGAAAGGCAGTTGCATTTTCATGCATCTCCCTGATCTCTGGGGTACCTGCCAACCTCCC
 TTCGACAAGGCAAGGACCACGTGTGGTCTTCTGGATTTCCACCATGTGGTCTGGTGGATGGGACAGTCT
 TCGACCAAAGATGTCTTGACTCTGTCCCTGCCACTAGCCACCTTACCCTCTAACTACTCAACCTGGGT
 GGGGGCTCCCCAGGATTGAGGAGGAGCAGGCGGGGAAGAGTCTTTGTGCCATGGTCCCCATGCCCTCC
 TGCTGGAGGAGGGGTGTCTCCCTCAGGGGTTGGTGGAGGAGGGGCTTTGGGCATCCCTGGGCTGGGGC
 AGGGCCAGATGTCTGCAGCTCCTCCATGTCTTTGATGGTGTGTCAACACTCAGACTGTTGTAACCTC
 TCGTTTTGTATGAGCAAAATTGTCTTTACTAAACAAATTAATAGTAAAAAAAAAAAAAAAAAAAAA

Restriction Sites: Ascl-NotI

ACCN: NM_008551

Insert Size: 1161 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).

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: [BC063064](#), [AAH63064](#)

RefSeq Size: 2586 bp

RefSeq ORF: 1161 bp

Locus ID: 17164

UniProt ID: [P49138](#)

Cytogenetics: 1 E4

Gene Summary: Stress-activated serine/threonine-protein kinase involved in cytokine production, endocytosis, reorganization of the cytoskeleton, cell migration, cell cycle control, chromatin remodeling, DNA damage response and transcriptional regulation. Following stress, it is phosphorylated and activated by MAP kinase p38-alpha/MAPK14, leading to phosphorylation of substrates. Phosphorylates serine in the peptide sequence, Hyd-X-R-X(2)-S, where Hyd is a large hydrophobic residue. Phosphorylates ALOX5, CDC25B, CDC25C, CEP131, ELAVL1, HNRNPA0, HSP27/HSPB1, KRT18, KRT20, LIMK1, LSP1, PABPC1, PARN, PDE4A, RCSD1, RPS6KA3, TAB3 and TTP/ZFP36. Phosphorylates HSF1; leading to the interaction with HSP90 proteins and inhibiting HSF1 homotrimerization, DNA-binding and transactivation activities (By similarity). Mediates phosphorylation of HSP27/HSPB1 in response to stress, leading to dissociation of HSP27/HSPB1 from large small heat-shock protein (sHsps) oligomers and impairment of their chaperone activities and ability to protect against oxidative stress effectively. Involved in inflammatory response by regulating tumor necrosis factor (TNF) and IL6 production post-transcriptionally: acts by phosphorylating AU-rich elements (AREs)-binding proteins ELAVL1, HNRNPA0, PABPC1 and TTP/ZFP36, leading to regulation of the stability and translation of TNF and IL6 mRNAs. Phosphorylation of TTP/ZFP36, a major post-transcriptional regulator of TNF, promotes its binding to 14-3-3 proteins and reduces its ARE mRNA affinity leading to inhibition of dependent degradation of ARE-containing transcripts. Phosphorylates CEP131 in response to cellular stress following ultraviolet irradiation which promotes binding of CEP131 to 14-3-3 proteins and inhibits formation of novel centriolar satellites (By similarity). Also involved in late G2/M checkpoint following DNA damage through a process of post-transcriptional mRNA stabilization: following DNA damage, relocalizes from nucleus to cytoplasm and phosphorylates HNRNPA0 and PARN, leading to stabilization of GADD45A mRNA. Involved in toll-like receptor signaling pathway (TLR) in dendritic cells: required for acute TLR-induced macropinocytosis by phosphorylating and activating RPS6KA3. [UniProtKB/Swiss-Prot Function]