

Product datasheet for **MG206027**

Mapkapk2 (BC063064) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mapkapk2 (BC063064) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mapkapk2
Synonyms:	AA960234; MAPKAP-K2; MK-2; MK2; Rps6kc1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG206027 representing BC063064 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTGTCGGGCTCTCCGGGCCAGACTCCGCCGGCGCCTTTCCAGCCCTCCACCGCCAGCCCCGGCCC
AGCCGCCCGCCGTTCCCCAGTTCACGTCAAGTCGGGCTGCAGATCCGAAAGAAGCCATCACCGA
CGACTACAAGGTACCAGCCAAGTGCTTGGCTGGGCATCAACGGGAAGGTGCTGCGGATCTTCGACAAG
AGAAGCCAGAAAAATTCGCCCTAAAGATGCTCCAGGACTGTCCGAAGGCGCGCAGAGAGGTGGAGCTGC
ACTGGAGGGCCTCCAGTGCCACACATTGTGCACATCGTGGATGTCTATGAGAACCTGTATGCCGGGAG
GAAGTGCCTGCTGATTGTGATGGAGTGTCTGATGGTGGAGAGCTCTTAGTCGAATCCAGGACCGAGGA
GACCAGGCATTCAGAAAGAGAGGCGTCAGAGATCATGAAGAGCATCGGCGAGGCCATCCAGTACCTGC
ACTCGATCAACATTGCTCACCGGATGTCAAGCCTGAGAACCTTTATATACTTCCAAAAGGCCAATGC
CATTTTGAAGTCACTGATTTTGGCTTTGCCAAGGAAACCACAGTCACAACCTTTGACCACTCCGTGT
TATACACCACTACTATGTGGCTCCGGAAGTCTGGGCCCGGAGAAGTATGACAAGTCTGTGACATGTGGT
CCTTGGGTGTCATCATGTATATTTGCTGTGTGGGTATCCCCCTTCTATTCCAATCACGGCCTTGCCAT
CTCTCCGGCATGAAGACTCGTATTCGAATGGGCCAGTATGAATTTCTAACCAGGAGTGGTCAGAAGTA
TCAGAAGAAGTGAAGATGCTTATCCGGAATCTGCTAAAAACAGAGCCACCCAGAGAATGACCATCACAG
AATTCATGAACCACCCCTGGATCATGCAATCTACGAAGTCCCTCAGACTCCACTGCACACCAGCCGTGT
CCTGAAGGAGGACAAGGAACGATGGGAGGATGTCAAGGAGGAGATGACCAGTGCCTTGGCCACGATGCGT
GTTGACTATGAGCAGATCAAGATAAAGAAGATAGAAGACGCATCAACCCCTCTGCTTCTCAAGAGCGGA
AGAAAGCTCGTGTGTGGAGGATGCGGCTCTCGCCAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG206027 representing BC063064
Red=Cloning site Green=Tags(s)

MLSGSPGQTPAPFPSPPPPAPAQPPPPFPQFHVKSGLQIRKNAITDDYKVT SQVLGLGINGKVLRIFDK
 RTQQK FALKMLQDCPKARREVELHWRASQCPIVHIVDVYENLYAGRKCLLIVMECLDGGELFSRIQDRG
 DQAFTEREASEIMKSIGEAIQYLHSINIAHRDVKPENLLYTSKRPNAILKLTDFGFAKETTSHNSLTTPC
 YTPYYVAPEVLGPEKYDKSCDMWSLGVIMYILLCGYPPFYNSHGLAISPGMKTRIRMGQYEFNPWESEV
 SEEVKMLIRNLLKTEPTQRMTITTFMHPWIMQSTKVPQTPHLSRVLKEDKERWEDVKEEMTSALATMR
 VDYEQIKIKKIEDASNPLLLKRRKKARAVEDAALAH

TRTRPLE - GFP Tag - V

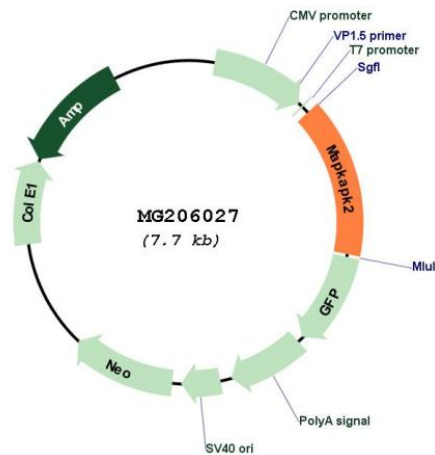
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

BC063064

ORF Size:	1160 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:	<ol style="list-style-type: none">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:	1160 bp
Locus ID:	17164
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]