

Product datasheet for **MC209718**

Map2k4 (NM_009157) Mouse Untagged Clone

Product data:

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| Product Type: | Expression Plasmids |
| Product Name: | Map2k4 (NM_009157) Mouse Untagged Clone |
| Tag: | Tag Free |
| Symbol: | Map2k4 |
| Synonyms: | JNKK1; MEK4; MKK4; PRKMK4; Sek1; Serk1 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Fully Sequenced ORF: | >NM_009157.4 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGGCTCCGAGCCGAGCGGCGGGCGGCTCCGGGGCGGTGGCGGCACCCGGGGCCATCGGAC
CTCCAGCTTCTGGCCACCCGGCGGTGAGCAGCATGCAGGGTAAGCGCAAAGCACTGAAGTTGAATTTTGC
AAATCCACCTGTCAAATCGACAGCACGGTTTACTCTGAATCCTAATACTACAGGAGTCCAGAACCCACAC
ATAGAGAGACTGAGAACACACAGCATTGAGTCATCAGAAAAGTGAAGATCTCCCCTGAACAACACTGGG
ATTTCACTGCAGAGGACTTGAAAGACCTTGAGAAATTGGACGAGGAGCTTATGGTTCTGTCAACAAAAT
GGTCCACAACCAAGTGGGCAGATAATGGCAGTTAAAAGAATTCGGTCAACTGTGGATGAAAAGAACA
AAACAACCTTCTCATGGATTTGGATGTAGTAATGCGGAGTAGTGATTGCCCATACATTGTTCAAGTTCTATG
GTGCACCTTTCAGAGAGGGCGACTGTTGGATCTGTATGGAGCTCATGTCTACCTCGTTCGATAAGTTTTA
CAAATATGTATATAGTGTGTTAGATGACGTTATTCGGAAGAGATCTTAGGCAAAATCACTTTAGCAACT
GTGAAAGCACTAAACCACTTAAAAGAAAAGTGAAGTATTCACAGAGACATCAAACCTTCAATATTC
TTCTGGACAGAAGTGGAAATATAAGCTCTGTGATTTCCGCATCAGTGGACAGCTTGTGGACTCTATTGC
CAAGACAAGAGATGCTGGGTGTAGGCCGTATATGGCACCTGAAAGAATAGACCAAGTGCATCAAGACAA
GGGTATGATGTCGCTCTGATGTCTGGAGTTTGGGGATCACATTTGACGAGTTGGCCACAGGCCGATTTTC
CTTATCCAAAGTGAATAGTGTATTTGATCAGCTAACACAAGTGGTGAAGGAGACCCCTCCGACAGCTGAG
TAATTCTGAAGAAAGGGAGTTCTCCCCAGTTTCACTTTGTCAACTTTGTGCCTTACGAAGGATGAA
TCCAAAAGGCCAAAGTATAAAGAGCTTCTGAAACATCCCTTTATTTTGTATGATGAAGAAGTACTGTAG
AGGTCGCATGCTATGTTTGTAAAATCCTGGATCAGATGCCAGCCACTCCCAGCTCGCCCATGTATGTCGA
CTGA

ACGCGTACGCGGCCGCTCGAGCAGAAAAGTCACTCTGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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| Chromatograms: | https://cdn.origene.com/chromatograms/ja1512_e04.zip |
| Restriction Sites: | Sgfl-Mlul |
| ACCN: | NM_009157 |
| Insert Size: | 1194 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: | <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: | NM_009157.4 , NP_033183.1 |
| RefSeq Size: | 3694 bp |
| RefSeq ORF: | 1194 bp |
| Locus ID: | 26398 |
| UniProt ID: | P47809 |
| Cytogenetics: | 11 40.53 cM |

Gene Summary:

Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. With MAP2K7/MKK7, is the one of the only known kinase to directly activate the stress-activated protein kinase/c-Jun N-terminal kinases MAPK8/JNK1, MAPK9/JNK2 and MAPK10/JNK3. MAP2K4/MKK4 and MAP2K7/MKK7 both activate the JNKs by phosphorylation, but they differ in their preference for the phosphorylation site in the Thr-Pro-Tyr motif. MAP2K4 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The phosphorylation of the Thr residue by MAP2K7/MKK7 seems to be the prerequisite for JNK activation at least in response to proinflammatory cytokines, while other stimuli activate both MAP2K4/MKK4 and MAP2K7/MKK7 which synergistically phosphorylate JNKs. MAP2K4 is required for maintaining peripheral lymphoid homeostasis. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Whereas MAP2K7/MKK7 exclusively activates JNKs, MAP2K4/MKK4 additionally activates the p38 MAPKs MAPK11, MAPK12, MAPK13 and MAPK14.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) lacks an alternate in-frame exon compared to variant 1. The resulting isoform (b) has the same N- and C-termini but is shorter compared to isoform a.