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Product datasheet for MC218283

Map2k7 (NM_001164172) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Map2k7 (NM_001164172) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Map2k7
Synonyms:	5930412N11Rik; JNKK 2; Jnkk2; MAPKK 7; Mapkk7; MEK 7; Mek7; Mkk7; Prkmk7; sek2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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Fully Sequenced ORF:

>MC218283 representing NM_001164172
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGCGTCCTCCCTGGAGCAGAAGCTGTCCCGCCTGGAAGCCAAGCTGAAGCAGGAGAACCGTGAGG
CCCGCAGGAGGATCGACCTCAACTTGGATATCAGCCCACAGCGGCCCAGGCCCATTATTGTGATCACTCT
AAGCCCTGCTCCTGCCCCGTCCCAGCGAGCAGCCCTGCAACTCCCACTGGCCAACGATGGGGGCAGCCGC
TCACCATCCTCAGAGAGCTCCCCACAGCACCCTACACCCCCCACCCGGCCCCGCCACATGCTGGGGCTCC
CATCAACCTTGTTCACACCGCGCAGTATGGAGAGCATCGAGATTGACCAGAAGCTGCAGGAGATCATGAA
GCAGACAGGGTACCTGACTATCGGGGGCCAGCGTTATCAGGCAGAAATCAATGACTTGGAGAACTTGGGT
GAGATGGGCAGTGGTACCTGTGGTCAGGTGTGGAAGATGCGGTTCCGGAAGACAGGCCACATCATTGCTG
TTAAGCAAATGCGGCGCTCTGGGAACAAGGAAGAGAATAAGCGCATTTTGATGGACCTGGATGTAGTACT
CAAGAGCCATGACTGCCCTTACATCGTTCAGTGCTTTGGCACCTTCATCACCAACACAGACGTCTTTATT
GCCATGGAGCTCATGGGCACATGTGCAGAGAAGCTGAAGAAACGAATGCAGGGCCCCATTCCAGAGCGAA
TCCTGGGCAAGATGACTGTGGCGATTGTGAAAGCACTGTACTATCTGAAGGAGAAGCATGGCGTCATCCA
TCGCGATGTCAAACCCTCCAACATCCTGCTAGATGAGCGGGGCCAGATCAAGCTCTGTGACTTTGGCATC
AGTGGCCGCCTTGTTGACTCCAAAGCCAAAACACGGAGTGCTGGCTGTGCTGCCTATATGGCTCCCGAGC
GCATCGACCCTCCAGATCCCACCAAGCCTGACTATGACATCCGAGCTGATGTGTGGAGCCTGGGCATCTC
ACTGGTGGAGCTGGCAACAGGACAGTTCCCCTATAAGAACTGCAAGACGGACTTTGAGGTCCTCACCAAA
GTCCTACAGGAAGAGCCCCCACTCCTGCCTGGTCACATGGGCTTCTCAGGGGACTTCCAGTCATTTGTCA
AAGACTGCCTTACTAAAGATCACAGGAAGAGACCAAAGTATAATAAGCTACTTGAACACAGCTTCATCAA
GCACTATGAGATACTCGAGGTGGATGTCGCGTCCTGGTTTAAGGATGTCATGGCGAAGACCGAGTCCCCA
AGGACTAGTGGAGTCCTGAGTCAGCACCATCTGCCCTTCTTCAGGTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001164172

Insert Size: 1308 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: NM_001164172.1, NP_001157644.1

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RefSeq Size:	3556 bp
RefSeq ORF:	1308 bp
Locus ID:	26400
UniProt ID:	Q8CE90
Cytogenetics:	8 A1.1
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 MAP2K4/MKK4, 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/MKK4 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The monophosphorylation of JNKs on the Thr residue is sufficient to increase JNK activity indicating that MAP2K7/MKK7 is important to trigger JNK activity, while the additional phosphorylation of the Tyr residue by MAP2K4/MKK4 ensures optimal JNK activation. Has a specific role in JNK signal transduction pathway activated by proinflammatory cytokines. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Part of a non-canonical MAPK signaling pathway, composed of the upstream MAP3K12 kinase and downstream MAP kinases MAPK1/ERK2 and MAPK3/ERK1, that enhances the AP-1-mediated transcription of APP in response to APOE (PubMed:28111074).[UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (3) retains the last intron compared to variant 1. The resulting isoform (3) has a shorter and distinct C-terminus compared to isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.

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