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Product datasheet for MC200742

Mapk12 (NM_013871) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mapk12 (NM_013871) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Mapk12
Synonyms:	AW123708; Erk6; P38gamma; Prkm12; Sapk3
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>BC021640 sequence for NM_013871

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CCACGCGTCCGGAGCCCGCAAAGGAAAATCTCAGAGGCGGGCAGGCGGGTAGCCGGCGCGGAGTACGCCC
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CTGACTCAGGGACATCATCTCTTCTGGAAGTGGGTGGATTCTCTTACACCCTTAGCCTGGAATTCGAACC
AGCCATTTGGTGTTGCCTAAGTGGCTGGGGGCAAATAAACCCTTTTGTAGATCTCCCAAAAAAAAAAAAA AAAAAA
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Restriction Sites:	RsrII-NotI
ACCN:	NM_013871
Insert Size:	1104 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	BC021640, AAH21640
RefSeq Size:	1826 bp
RefSeq ORF:	1104 bp
Locus ID:	29857
UniProt ID:	O08911
Cytogenetics:	15 E3

Gene Summary: Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. MAPK12 is one of the four p38 MAPKs which play an important role in the cascades of cellular responses evoked by extracellular stimuli such as proinflammatory cytokines or physical stress leading to direct activation of transcription factors such as ELK1 and ATF2. Accordingly, p38 MAPKs phosphorylate a broad range of proteins and it has been estimated that they may have approximately 200 to 300 substrates each. Some of the targets are downstream kinases such as MAPKAPK2, which are activated through phosphorylation and further phosphorylate additional targets. Plays a role in myoblast differentiation and also in the down-regulation of cyclin D1 in response to hypoxia in adrenal cells suggesting MAPK12 may inhibit cell proliferation while promoting differentiation. Phosphorylates DLG1. Following osmotic shock, MAPK12 in the cell nucleus increases its association with nuclear DLG1, thereby causing dissociation of DLG1-SFPQ complexes. This function is independent of its catalytic activity and could affect mRNA processing and/or gene transcription to aid cell adaptation to osmolarity changes in the environment. Regulates UV-induced checkpoint signaling and repair of UV-induced DNA damage and G2 arrest after gamma-radiation exposure. MAPK12 is involved in the regulation of SLC2A1 expression and basal glucose uptake in L6 myotubes; and negatively regulates SLC2A4 expression and contraction-mediated glucose uptake in adult skeletal muscle. C-Jun (JUN) phosphorylation is stimulated by MAPK14 and inhibited by MAPK12, leading to a distinct AP-1 regulation. MAPK12 is required for the normal kinetochore localization of PLK1, prevents chromosomal instability and supports mitotic cell viability. MAPK12-signaling is also positively regulating the expansion of transient amplifying myogenic precursor cells during muscle growth and regeneration. [UniProtKB/Swiss-Prot Function]