

## Product datasheet for **TP506802**

### Mapk8 (NM\_016700) Mouse Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse mitogen-activated protein kinase 8 (Mapk8), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR206802 representing NM_016700 <b>Red</b> =Cloning site <b>Green</b> =Tags(s)
	<p>MSRSKRDNNFYSVEIGDSTFTVLKRYQNLKPIGSGAQGIVCAAYDAILERNVAIKKLSRPFQNPQTHAKRA YRELVLMKCVNHKNIIGLLNVFTQKSLEEFQDVYVIMELMDANLCQVIQMELDHERMSYLLYQMLCGIK HLHSAGIIHRDLKPSNIVKSDCTLKILDFGLARTAGTSFMMTPYVTRYRAPEVILGMGYKENVDLWS VGCIMGEMVCHKILFPGRDYIDQWNKVIEQLGTPCEPFMKKLQPTVRTYVENRPKYAGYSFEKLPDVLV PADSEHNKLGASQARDLLSKMLVIDASKRISVDEALQHPYINVWYDPSEAEAPPPKIPDKQLDEREHTIE EWKELIYKEVMDLEERTKNGVIRGQPSPLAQVQQ</p> <p><b>TRTRPLEQKLISEEDLAANDILDYKDDDDKV</b></p>
Tag:	C-MYC/DDK
Predicted MW:	44.7 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C after receiving vials.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	<a href="#">NP_057909</a>
Locus ID:	26419
UniProt ID:	<a href="#">Q91Y86</a> , <a href="#">Q544A0</a>



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RefSeq Size: 5770

Cytogenetics: 14 B

RefSeq ORF: 1152

Synonyms: AI849689; JNK; JNK1; Prkm8; SAPK1

**Summary:** Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation and programmed cell death. Extracellular stimuli such as proinflammatory cytokines or physical stress stimulate the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. In this cascade, two dual specificity kinases MAP2K4/MKK4 and MAP2K7/MKK7 phosphorylate and activate MAPK8/JNK1. In turn, MAPK8/JNK1 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN, JDP2 and ATF2 and thus regulates AP-1 transcriptional activity. Phosphorylates the replication licensing factor CDT1, inhibiting the interaction between CDT1 and the histone H4 acetylase HBO1 to replication origins. Loss of this interaction abrogates the acetylation required for replication initiation. Promotes stressed cell apoptosis by phosphorylating key regulatory factors including p53/TP53 and Yes-associates protein YAP1. In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of T-helper cells into Th1 cells. Contributes to the survival of erythroid cells by phosphorylating the antagonist of cell death BAD upon EPO stimulation. Mediates starvation-induced BCL2 phosphorylation, BCL2 dissociation from BECN1, and thus activation of autophagy. Phosphorylates STMN2 and hence regulates microtubule dynamics, controlling neurite elongation in cortical neurons. In the developing brain, through its cytoplasmic activity on STMN2, negatively regulates the rate of exit from multipolar stage and of radial migration from the ventricular zone (By similarity). Phosphorylates several other substrates including heat shock factor protein 4 (HSF4), the deacetylase SIRT1, ELK1, or the E3 ligase ITCH. Phosphorylates the CLOCK-ARNTL/BMAL1 heterodimer and plays a role in the regulation of the circadian clock (PubMed:22441692). Phosphorylates the heat shock transcription factor HSF1, suppressing HSF1-induced transcriptional activity (By similarity). Phosphorylates POU5F1, which results in the inhibition of POU5F1's transcriptional activity and enhances its proteosomal degradation (PubMed:29153991).[UniProtKB/Swiss-Prot Function]