

Product datasheet for **TP505996**

Mapkapk3 (NM_178907) Mouse Recombinant Protein

Product data:

Product Type: Recombinant Proteins

Description: Purified recombinant protein of Mouse mitogen-activated protein kinase-activated protein kinase 3 (Mapkapk3), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug

Species: Mouse

Expression Host: HEK293T

Expression cDNA Clone or AA Sequence: >MR205996 protein sequence
Red=Cloning site **Green**=Tags(s)

MDGETAGEKGSVPPPGALGGSALGGAPAGVRRPKKYAVTDDYQLSKQVLGLGVNGKVLCEYHRRSGQ
KCALKLLYDSPKARQEVDDHHWQASGGPHIVRILDVYENMHHGKRCLLIVMECEGGELFSRIQERGDQAF
TEREAAEIMRDIGTAIQFLHSRNIAHRDVKPENLLYSKEKDAVLKLTDFGFAKETTQNALQTPCYTPYY
VAPEVLGPEKYDKSCDMWSLGVIMYILLCGFPPFYSNTGQAISPGMKRRIRLQYSPNPEWLDVSEDAK
QLIRLLLKTDPTEKLTIMQFMNHPWINQSMVVPQTPLYTARVLQEDKDHWDVKEEMTSALATMRVDYDQ
VKIKDLKTSNNRLLNKRKQAGSSASQGCNNQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag: C-MYC/DDK

Predicted MW: 43.3 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: [NP_849238](#)

Locus ID: 102626

UniProt ID: [Q3UMW7](#)



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RefSeq Size: 2816

Cytogenetics: 9 F1

RefSeq ORF: 1155

Synonyms: 3PK; AI874665; MAPKAP-K3; MAPKAP3; MapkKapk3; MK-3; MK3

Summary: Stress-activated serine/threonine-protein kinase involved in cytokines production, endocytosis, cell migration, chromatin remodeling 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. MAPKAPK2 and MAPKAPK3, share the same function and substrate specificity, but MAPKAPK3 kinase activity and level in protein expression are lower compared to MAPKAPK2. Phosphorylates HSP27/HSPB1, KRT18, KRT20, RCSD1, RPS6KA3, TAB3 and TTP/ZFP36. Mediates phosphorylation of HSP27/HSPB1 in response to stress, leading to dissociate HSP27/HSPB1 from large small heat-shock protein (sHsps) oligomers and impair 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, such as TTP/ZFP36, leading to regulate 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 transcript. Involved in toll-like receptor signaling pathway (TLR) in dendritic cells: required for acute TLR-induced macropinocytosis by phosphorylating and activating RPS6KA3. Also acts as a modulator of Polycomb-mediated repression. [UniProtKB/Swiss-Prot Function]