# Recombinant Human MAPKAPK3 Protein (D2-Q382), GST tagged

**Cat. No.** MAPKAPK3-1230H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant Human GST-TEV-GG-MAPKAPK3(D2-Q382 end) Protein was expressed in Insect cell. |
| **Species** | Human |
| **Source** | Insect Cells |
| **ProteinLength** | D2-Q382 |
| **Description** | 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, |

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| | 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. |
| **Form** | Liquid |
| **Endotoxin** | < 0.01 EU per μg of the protein |
| **Purity** | 90% |
| **Stability** | Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade. |
| **Storage** | Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| **Storage Buffer** | Supplied as sterile 50mM Tris-HCl (pH 7.5), 200mM NaCl, 20% glycerol |
| **Shipping** | It is shipped out with blue ice. |

## GENE INFORMATION

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| **Gene Name** | MAPKAPK3 mitogen-activated protein kinase-activated protein kinase 3 [ Homo sapiens (human) ] |
| **Official Symbol** | MAPKAPK3 |

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| **Synonyms** | MAPKAPK3; mitogen-activated protein kinase-activated protein kinase 3; MAP kinase-activated protein kinase 3; 3pK; 3PK; MAPKAP3; MAPKAP kinase 3; chromosome 3p kinase; MAPK-activated protein kinase 3; MK-3; MAPKAP-K3; MAPKAPK-3; |
| **Gene ID** | 7867 |
| **mRNA Refseq** | NM_001243925 |
| **Protein Refseq** | NP_001230854 |
| **MIM** | 602130 |
| **UniProt ID** | Q16644 |

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