



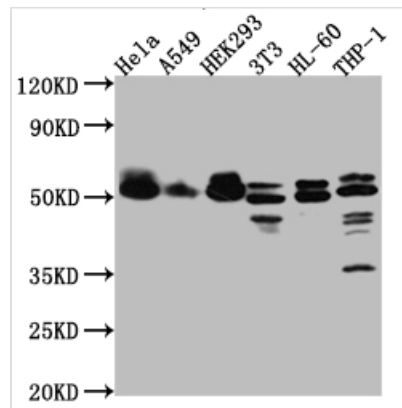
MAPKAPK2 Antibody

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| Product Code | CSB-RA951792A0HU |
| Storage | Upon receipt, store at -20°C or -80°C. Avoid repeated freeze. |
| Uniprot No. | P49137 |
| Immunogen | A synthesized peptide derived from human MAPKAP Kinase 2 |
| Species Reactivity | Human, Mouse |
| Tested Applications | ELISA, WB; Recommended dilution: WB:1:500-1:5000 |
| Relevance | <p>Stress-activated serine/threonine-protein kinase involved in cytokine production, endocytosis, reorganization of the cytoskeleton, cell migration, cell cycle control, chromatin remodeling, DNA damage response 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. Phosphorylates ALOX5, CDC25B, CDC25C, CEP131, ELAVL1, HNRNPA0, HSP27/HSPB1, KRT18, KRT20, LIMK1, LSP1, PABPC1, PARN, PDE4A, RCSD1, RPS6KA3, TAB3 and TTP/ZFP36. Phosphorylates HSF1; leading to the interaction with HSP90 proteins and inhibiting HSF1 homotrimerization, DNA-binding and transactivation activities (PubMed:16278218). Mediates phosphorylation of HSP27/HSPB1 in response to stress, leading to the dissociation of HSP27/HSPB1 from large small heat-shock protein (sHsps) oligomers and impairment of 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 ELAVL1, HNRNPA0, PABPC1 and TTP/ZFP36, leading to the regulation of 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 transcripts. Phosphorylates CEP131 in response to cellular stress induced by ultraviolet irradiation which promotes binding of CEP131 to 14-3-3 proteins and inhibits formation of novel centriolar satellites (PubMed:26616734). Also involved in late G2/M checkpoint following DNA damage through a process of post-transcriptional mRNA stabilization: following DNA damage, relocalizes from nucleus to cytoplasm and phosphorylates HNRNPA0 and PARN, leading to stabilization of GADD45A mRNA. Involved in toll-like receptor signaling pathway (TLR) in dendritic cells: required for acute TLR-induced macropinocytosis by phosphorylating and activating RPS6KA3.</p> |
| Form | Liquid |
| Conjugate | Non-conjugated |
| Storage Buffer | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. |



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| Purification Method | Affinity-chromatography |
| Isotype | Rabbit IgG |
| Clonality | Monoclonal |
| Product Type | Recombinant Antibody |
| Immunogen Species | Homo sapiens (Human) |
| Research Area | Cardiovascular; Signal transduction |
| Gene Names | MAPKAPK2 |
| Accession NO. | 4G7 |

Image



Western Blot

Positive WB detected in: HeLa whole cell lysate, A549 whole cell lysate, HEK293 whole cell lysate, NIH/3T3 whole cell lysate, HL-60 whole cell lysate, THP-1 whole cell lysate

All lanes: MAPKAPK2 antibody at 1:1000

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 46, 43 kDa

Observed band size: 50 kDa

Description

MAPKAPK2, also called MK2, is a downstream substrate of the p38MAPK. In response to diverse extracellular stimuli, MK2 is phosphorylated and activated by p38MAPK and influences crucial signaling events, regulating inflammatory cytokines, transcript stability, and critical cellular processes, including actin remodeling, cell migration, immune responses, cell cycle, and apoptosis. MK2 is the master regulator of tumorigenesis. In tumor cells, the emergence of MK2 as an alternative cell-cycle checkpoint, responsible for resistance to apoptosis caused by p53 mutation, has put forward MK2 as an effective target for combination-based cancer therapies.

The production of this recombinant MAPKAPK2 antibody started with immunization. And then the workflow included B cell harvest and enrichment; import single B cell; assays to identify the specificity, affinity & functionality of the cell; export the single B cell; cDNA synthesis and sequencing; express the MAPKAPK2 antibody in mammalian cells. The target MAPKAPK2 antibody was validated in ELISA, WB.