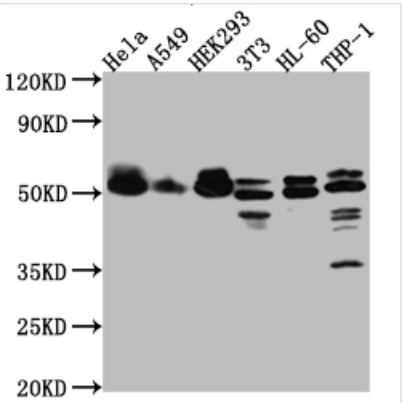
MAPKAPK2 Recombinant Monoclonal Antibody

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	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.
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.

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
Clone 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

The MAPKAPK2 recombinant monoclonal antibody can be used to detect human and mouse MAPKAPK2 proteins in ELISA and WB applications. This antibody is produced using recombinant DNA technology, where the gene coding for the MAPKAPK2 monoclonal antibody is synthesized after sequencing the cDNA of the MAPKAPK2 antibody-producing hybridomas. These hybridomas are generated by fusing myeloma cells and B cells that were isolated from an animal immunized with a synthesized peptide derived from human MAPKAPK2. The synthesized gene is then cloned into a vector and transfected into cells for cultivation. Finally, the resulting MAPKAPK2 recombinant monoclonal antibody is purified through affinity chromatography from the cell culture supernatant.

The MAPKAPK2 protein mainly regulates various cellular processes, including cell growth, differentiation, and apoptosis. MAPKAPK2 is activated by the p38 MAPK pathway, which is a critical regulator of cellular stress response. Once activated, MAPKAPK2 phosphorylates a variety of target proteins, including transcription factors and other kinases, leading to changes in gene expression and cellular activity. Additionally, MAPKAPK2 plays a role in the immune response and has been implicated in a range of diseases, including cancer and neurodegenerative disorders.