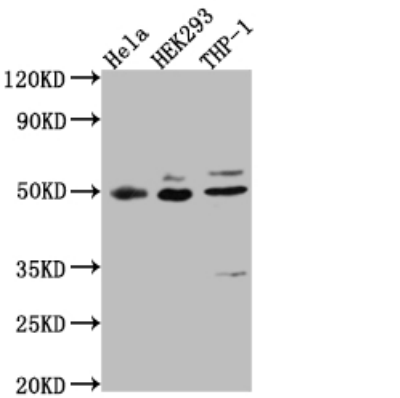
MAPKAPK2 Recombinant Monoclonal Antibody

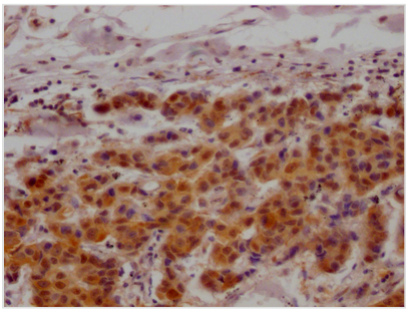
Product Code	CSB-RA990134A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P49137
Immunogen	A synthesized peptide derived from human MAPKAP Kinase 2
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
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.	4H8

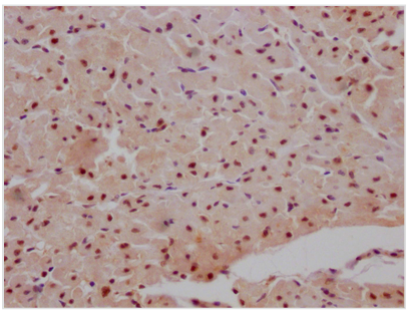
Image



Western Blot
Positive WB detected in: Hela whole cell lysate, HEK293 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: 49 kDa



IHC image of CSB-RA990134A0HU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA990134A0HU diluted at 1:100 and staining in paraffin-embedded human heart tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The process of producing a MAPKAPK2 recombinant antibody involves four main steps: first, the MAPKAPK2 monoclonal antibody gene is sequenced, then the gene is cloned into a plasmid vector. Next, the recombinant vector is

introduced into a host cell line, followed by the purification of the MAPKAPK2 recombinant monoclonal antibody from the cell culture supernatant using affinity chromatography. The MAPKAPK2 monoclonal antibody is obtained from MAPKAPK2 antibody-producing hybridomas and a synthesized peptide from human MAPKAPK2 is used as the immunogen during the production process. This MAPKAPK2 recombinant monoclonal antibody is recommended for use in ELISA, WB, and IHC applications to detect human MAPKAPK2 protein.

The MAPKAPK2 protein is a serine/threonine kinase that is activated by stress-activated protein kinases (SAPKs) and p38 MAPKs. Its main role is to regulate cell survival, proliferation, and differentiation in response to various stress stimuli. MAPKAPK2 has been shown to be involved in a wide range of cellular processes, including cytokinesis, cell motility, and gene expression. MAPKAPK2 has been implicated in the regulation of inflammatory responses, insulin signaling, and cancer cell proliferation. Additionally, MAPKAPK2 plays an important role in the regulation of heat shock protein (HSP) expression, which is critical for cell survival during conditions of stress.