MAPKAPK2 Protein, Human (His)

Cat. No.:	HY-P701805
Synonyms:	MAPKAPK2; MAP kinase-activated protein kinase 2; MAPK-activated protein kinase 2; MAPKAP kinase 2; MAPKAP-K2; MAPKAPK-2; MK-2; MK2
Species:	Human
Source:	E. coli
Accession:	P49137 (H47-R364, ΔH217-P237, S216G)
Gene ID:	9261
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	MAPKAPK2 protein is a stress-activated serine/threonine-protein kinase with a multifaceted role in cellular processes. It participates in cytokine production, endocytosis, cytoskeleton reorganization, cell migration, cell cycle control, chromatin remodeling, DNA damage response, and transcriptional regulation. Upon stress, MAPKAPK2 is phosphorylated and activated by MAP kinase p38-alpha/MAPK14, leading to the phosphorylation of various substrates. It phosphorylates serine in specific peptide sequences and targets proteins involved in diverse cellular functions. Notably, MAPKAPK2 mediates the inflammatory response by regulating the post-transcriptional aspects of tumor necrosis factor (TNF) and IL6 production. It accomplishes this by phosphorylating AU-rich element (ARE)-binding proteins, affecting mRNA stability and translation. Additionally, MAPKAPK2 plays a crucial role in the late G2/M checkpoint following DNA damage, contributing to post-transcriptional mRNA stabilization. Its involvement in the toll-like receptor signaling pathway in dendritic cells underscores its significance in immune responses. Overall, MAPKAPK2 emerges as a key player in orchestrating cellular responses to stress and various signaling pathways.

Caution: Product has not been fully validated for medical applications. For research use only.

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