

MAP2K7 Protein, Human (Sf9)

Cat. No.:	HY-P701798
Synonyms:	MAP2K7; Dual specificity mitogen-activated protein kinase kinase 7; MAP kinase kinase 7; MAPKK 7; JNK-activating kinase 2; MAPK/ERK kinase 7; MEK 7; Stress-activated protein kinase kinase 4; SAPK kinase 4; SAPKK-4; SAPKK4; c-Jun N-terminal kinase kinase 2; JNK kinase 2; JNKK 2
Species:	Human
Source:	Sf9 insect cells
Accession:	O14733 (A2-R419)
Gene ID:	5609
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.
Reconstitution	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	<p>MAP2K7, a dual specificity protein kinase, plays a pivotal role as an essential component in the MAP kinase signal transduction pathway, particularly in the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling cascade. Teaming up with MAP2K4/MKK4, MAP2K7/MKK7 directly activates JNK family members, including MAPK8/JNK1, MAPK9/JNK2, and MAPK10/JNK3, by phosphorylating the critical Thr-Pro-Tyr motif. Notably, MAP2K7/MKK7 exhibits a preference for phosphorylating the Thr residue, while MAP2K4/MKK4 favors the Tyr residue. This distinction ensures optimal JNK activation, as the monophosphorylation of JNKs on the Thr residue alone is sufficient to enhance their activity. MAP2K7/MKK7's specific involvement in the JNK signaling pathway activated by pro-inflammatory cytokines contributes to cellular responses, including mitochondrial death signaling leading to apoptosis. Furthermore, MAP2K7 participates in a non-canonical MAPK signaling pathway alongside MAP3K12, MAPK1/ERK2, and MAPK3/ERK1, enhancing AP-1-mediated transcription of APP in response to APOE.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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