IKKβ Protein, Human (Sf9, GST)

Cat. No.:	HY-P701786
Synonyms:	IKBKβ; Inhibitor of nuclear factor kappa-B kinase subunit beta; I-kappa-B-kinase beta; IKK-B; IKK-beta; IkBKB; I-kappa-B kinase 2; IKK2; Nuclear factor NF-kappa-B inhibitor kinase beta; NFKBIKB; Serine/threonine protein kinase IKBKB
Species:	Human
Source:	Sf9 insect cells
Accession:	O14920 (S695-S756)
Gene ID:	3551
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	IKKβ protein, a serine kinase, plays a pivotal role in the NF-kappa-B signaling pathway, activated by diverse stimuli such as inflammatory cytokines, bacterial or viral products, DNA damage, or cellular stresses. As a constituent of the canonical IKK complex, IKKβ contributes to the conventional NF-kappa-B activation pathway. It phosphorylates inhibitors of NF-kappa-B on critical serine residues, facilitating their polyubiquitination and subsequent degradation by the proteasome. This orchestrated modification unleashes free NF-kappa-B, allowing its translocation into the nucleus and activation of the transcription of numerous genes involved in immune response, growth control, or protection against apoptosis. Beyond NF-kappa-B inhibitors, IKKβ phosphorylates various signaling pathway components, including NEMO/IKBKG, NF-kappa-B subunits RELA and NFKB1, as well as IKK-related kinases TBK1 and IKBKE. These phosphorylations exert a negative regulation on canonical IKKs and may prevent the excessive production of inflammatory mediators. Moreover, IKKβ targets substrates such as FOXO3, NAA10, NCOA3, BCL10, IRS1, RIPK1, and IRF5, influencing diverse cellular processes and responses.

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

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