RIPK1 Protein, Human (Sf9, His, GST)

Cat. No.:	HY-P701768
Synonyms:	RIPK1; Receptor-interacting serine/threonine-protein kinase 1; Cell death protein RIP; Receptor-interacting protein 1; RIP-1
Species:	Human
Source:	Sf9 insect cells
Accession:	Q13546 (M1-A327)
Gene ID:	8737
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	RIPK1, a serine-threonine kinase, stands as a pivotal regulator orchestrating TNF-mediated apoptosis, necroptosis, and inflammatory pathways. Functionally, RIPK1 exhibits kinase-dependent roles in cell death regulation and kinase-independent scaffold functions governing inflammatory signaling and cell survival. As a scaffold protein within the TNF-R1 signaling complex, RIPK1 promotes cell survival by activating the canonical NF-kappa-B pathway. In the context of cell death, RIPK1, through its kinase activity, crucially regulates the assembly of death-inducing complexes—complex IIa (RIPK1-FADD-CASP8) for apoptosis and complex IIb (RIPK1-RIPK3-MLKL) for necroptosis. In normal conditions, RIPK1 inhibits RIPK3-dependent necroptosis by impeding the interaction of TRADD with FADD, thus limiting aberrant CASP8 activation. Additionally, RIPK1 contributes to the inflammatory response by fostering the transcriptional production of pro-inflammatory cytokines like interleukin-6 (IL6). Notably, RIPK1's kinase activity extends to phosphorylating RIPK3, DAB2IP, and participating in ZBP1-induced NF-kappa-B activation in response to DNA damage, highlighting its multifaceted roles in cellular processes.

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

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