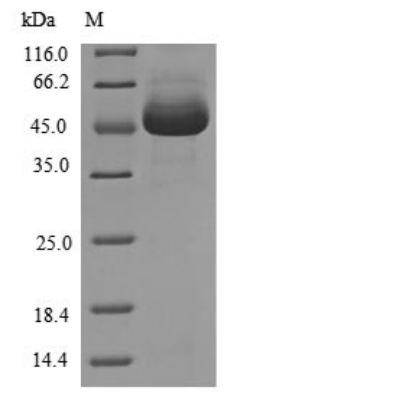
Recombinant Human Receptor-interacting serine/threonine-protein kinase 1 (RIPK1), partial

Product Code	CSB-EP618785HU2
Relevance	Serine-threonine kinase which transduces inflammatory and cell-death signals (programmed necrosis) following death receptors ligation, activation of pathogen recognition receptors (PRRs), and DNA damage. Upon activation of TNFR1 by the TNF-alpha family cytokines, TRADD and TRAF2 are recruited to the receptor. Phosphorylates DAB2IP at 'Ser-728' in a TNF-alpha-dependent manner, and thereby activates the MAP3K5-JNK apoptotic cascade. Ubiquitination by TRAF2 via 'Lys-63'-link chains acts as a critical enhancer of communication with downstream signal transducers in the mitogen-activated protein kinase pathway and the NF-kappa-B pathway, which in turn mediate downstream events including the activation of genes encoding inflammatory molecules. Polyubiquitinated protein binds to IKBKG/NEMO, the regulatory subunit of the IKK complex, a critical event for NF-kappa-B activation. Interaction with other cellular RHIM-containing adapters initiates gene activation and cell death. RIPK1 and RIPK3 association, in particular, forms a necrosis-inducing complex.
Abbreviation	Recombinant Human RIPK1 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q13546
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MQPDMSLNVIKMKSSDFLESAELDSGGFGKVSLCFHRTQGLMIMKTVYKGPN CIEHNEALLEEAKMMNRLRHSRVVKLLGVIIEEGKYSLVMEYMEKGNLMHVLK AEMSTPLSVKGRIILEIIEGMCYLHGKGVIHKDLKPENILVDNDFHIKIADLGLASF KMWSKLNNEEHNELREVDGTAKKNGGTLYYMAPEHLNDVNAKPTEKSDVYS FAVVLWAIFANKEPYENAICEQQLIMCIKSGNRPDVDDITEYCPREIISLMKLCW EANPEARPTFPGIEEKFRPFYLSQLEESVEEDVKSLKKEYSNENAVVKRMQSL QLDCVAVPSSRSNSATEQPGSLHSSQGLGMGPVEESWFAPSLEHPQEENEP SLQ
Research Area	Cell Biology
Source	E.coli
Target Names	RIPK1
Protein Names	Cell death protein RIP Receptor-interacting protein 1 Short name: RIP-1 Serine/threonine-protein kinase RIP RIP, RIP1

Expression Region	1-375aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	49.4 kDa
Protein Length	Partial

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The expression region of this recombinant Human RIPK1 covers amino acids 1-375. The expected molecular weight for the RIPK1 protein is calculated to be 49.4 kDa. The RIPK1 protein was expressed in e.coli. Fusion of the N-terminal 10xHis tag and C-terminal Myc tag into the RIPK1 encoding gene fragment was conducted, allowing for easier detection and purification of the RIPK1 protein in subsequent stages.

Human receptor-interacting Serine/Threonine-Protein kinase 1 (RIPK1) is a pivotal regulator of cell survival and inflammation. Acting as a signaling node in death receptor pathways, RIPK1 controls cell fate decisions by modulating apoptosis, necroptosis, and inflammation. In immunology research, RIPK1 is essential for immune response modulation. Dysregulation of RIPK1 is implicated in inflammatory and autoimmune diseases. In cancer research, its role in cell death pathways makes RIPK1 a potential target for therapeutic intervention. Furthermore, RIPK1 is involved in neurodegenerative disorders. Investigating RIPK1 provides insights into diverse physiological processes, offering avenues for developing treatments targeting cell death, inflammation, and related diseases.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.
Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.