Recombinant Human RIPK1 Protein (M1-A327), Tag Free

Cat. No. RIPK1-1200H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human GG-RIPK1(M1-A327) Protein was expressed in Insect cell.
Species	Human
Source	Insect Cells
ProteinLength	M1-A327
Description	Serine-threonine kinase which is a key regulator of TNF-mediated apoptosis, necroptosis and inflammatory pathways. Exhibits kinase activity-dependent functions that regulate cell death and kinase-independent scaffold functions regulating inflammatory signaling and cell survival. Has kinase-independent scaffold functions: upon binding of TNF to TNFR1, RIPK1 is recruited to the TNF-R1 signaling complex (TNF-RSC also known as complex I) where it acts as a scaffold protein promoting cell survival, in part, by activating the canonical NF-kappa-B pathway. Kinase activity is essential to regulate necroptosis and apoptosis, two parallel forms of cell death: upon activation of its protein kinase activity, regulates assembly of two death-inducing complexes, namely complex IIa (RIPK1-FADD-CASP8), which drives apoptosis, and the complex IIb (RIPK1-RIPK3-MLKL), which drives necroptosis. RIPK1 is required to limit CASP8-dependent TNFR1-induced apoptosis. In normal conditions, RIPK1 acts as an inhibitor of RIPK3-dependent necroptosis, a process mediated by RIPK3 component of complex IIb, which catalyzes phosphorylation of MLKL upon induction by ZBP1. Inhibits RIPK3-mediated necroptosis via FADD-mediated recruitment of CASP8, which cleaves RIPK1 and limits TNF-induced necroptosis. Required to inhibit

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	apoptosis and necroptosis during embryonic development: acts by preventing the interaction of TRADD with FADD thereby limiting aberrant activation of CASP8. In addition to apoptosis and necroptosis, also involved in inflammatory response by promoting transcriptional production of pro-inflammatory cytokines, such as interleukin-6 (IL6). Phosphorylates RIPK3: RIPK1 and RIPK3 undergo reciprocal auto- and trans-phosphorylation. Phosphorylates DAB2IP at 'Ser-728' in a TNF-alpha-dependent manner, and thereby activates the MAP3K5-JNK apoptotic cascade. Required for ZBP1-induced NF-kappa-B activation in response to DNA damage.
Form	Liquid
Endotoxin	< 0.01 EU per μg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	RIPK1 receptor (TNFRSF)-interacting serine-threonine kinase 1 [Homo sapiens (human)]
Official Symbol	RIPK1

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Synonyms	RIPK1; receptor (TNFRSF)-interacting serine-threonine kinase 1; receptor-interacting serine/threonine-protein kinase 1; RIP; RIP-1; cell death protein RIP; receptor interacting protein; receptor-interacting protein 1; serine/threonine-protein kinase RIP; RIP1; FLJ39204;
Gene ID	8737
mRNA Refseq	NM_003804
Protein Refseq	NP_003795
MIM	603453
UniProt ID	Q13546

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