Recombinant RIPK3 protein (His tag)

Catalog Number	546330
Synonyms	RIP-like protein kinase 3; Receptor-interacting protein 3; RIP-3
Species	Human
Expression System	E. coli
Accession	Q9Y572
Molecular Weight	Predictes a molecular mass of 36.03 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	1-312
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-312 aa (Q9Y572) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human RIPK3 Protein Kinase Domain (residues 1-312) - A high-purity fragment encompassing the complete serine/threonine-protein kinase domain of Receptor-interacting serine/threonine-protein kinase 3 (RIPK3), essential for studying necroptosis, apoptosis, and metabolic regulation pathways in cellular death mechanisms. Receptor-interacting serine/threonine-protein kinase 3 (RIPK3) is a crucial regulator of programmed cell death pathways, primarily activating necroptosis in response to TNF-alpha family members and viral infections. This serine/threonine-protein kinase forms necrosis-inducing complexes and mediates phosphorylation of MLKL, leading to plasma membrane disruption and calcium influx characteristic of programmed necrosis. Beyond necroptosis, RIPK3 regulates apoptosis through RIPK1, FADD, and CASP8-dependent mechanisms and plays a role in metabolic regulation by binding to and enhancing the activity of metabolic enzymes GLUL, GLUD1, and PYGL. The protein is primarily localized in the cytoplasm and cytosol, with nuclear presence observed during influenza A virus infection. This recombinant fragment specifically contains the complete protein kinase domain (residues 21-287), making it an ideal tool for investigating kinase activity, protein interactions, and signaling mechanisms in cell death pathways.