Recombinant ERI1 protein (His tag)

Catalog Number	545376
Synonyms	3'-5' exonuclease ERI1; Eri-1 homolog; Histone mRNA 3'-end-specific exoribonuclease; Histone mRNA 3'-exonuclease 1; Protein 3'hExo; HEXO
Species	Human
Expression System	E. coli
Accession	Q8IV48
Molecular Weight	Predictes a molecular mass of 35.34 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	61-349
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 61-349 aa (Q8IV48) 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 3'-5' Exoribonuclease 1 (ERI1) Fragment (aa 61-349) is a high-purity protein designed for functional studies of RNA metabolism. This 289-amino acid fragment contains the complete SAP and Exonuclease domains, making it an ideal tool for investigating histone mRNA decay, RNA interference regulation, and ribosomal RNA processing mechanisms. 3'-5' Exoribonuclease 1 (ERI1) is a crucial RNA exonuclease that binds to the 3'-end of histone mRNAs and degrades them, playing an essential role in histone mRNA decay after DNA replication. The enzyme requires 2' and 3'-hydroxyl groups at the last nucleotide for efficient activity and also functions as a regulator of RNA interference by degrading the 3'-overhangs of short interfering RNAs (siRNAs). Additionally, ERI1 is required for 5.8S rRNA 3'-end processing and binds with high affinity to the stem-loop structure of replication-dependent histone pre-mRNAs. The protein exhibits biphasic kinetics with rapid hydrolysis of unpaired RNA nucleotides followed by slower cleavage through stem structures. ERI1-mediated RNA metabolism has been shown to play a key role in chondrogenesis. The protein localizes to the cytoplasm, nucleus, and nucleolus, reflecting its diverse functional roles in cellular RNA processing and degradation pathways.