Recombinant USB1 protein (His tag)

Catalog Number	548093
Synonyms	hUsb1; 3'-5' RNA exonuclease USB1; Mutated in poikiloderma with neutropenia protein 1; Mutated in PN protein 1; hMpn1
Species	Human
Expression System	E. coli
Accession	Q9BQ65
Molecular Weight	Predictes a molecular mass of 27.44 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 28 kDa band.

Product Information

Sequence Region	43-265
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 43-265 aa (Q9BQ65) 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 U6 snRNA phosphodiesterase 1 (hUsb1) fragment (residues 43-265), a stable and soluble protein unit ideal for investigating RNA processing mechanisms, structural studies, and enzymatic assays. This fragment retains key functional characteristics, supporting research in RNA exonuclease activity and U6 snRNA maturation. U6 snRNA phosphodiesterase 1 (hUsb1), encoded by the USB1 gene, is a 3'-5' RNA exonuclease essential for trimming the 3' ends of oligo(U) and oligo(A) tracts in pre-U6 small nuclear RNA (snRNA). This activity generates mature U6 snRNA with a 2',3'-cyclic phosphate terminus, preventing degradation and ensuring proper function in RNA processing pathways. The protein also processes U6atac snRNA and potentially vault RNA VTRNA1-1. Located in the nucleus, hUsb1 plays a critical role in RNA maturation, and mutations in this protein are linked to poikiloderma with neutropenia, underscoring its biological and clinical significance.