Recombinant PELO protein (His tag)

Catalog Number	541142
Synonyms	hPelota; Protein Dom34 homolog
Species	Human
Expression System	E. coli
Accession	Q9BRX2
Molecular Weight	Predictes a molecular mass of 45.02 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 47 kDa band.

Product Information

Sequence Region	1-385
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-385 aa (Q9BRX2) 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 Protein pelota homolog (hPelota) fragment (amino acids 1-385) - a high-quality, soluble protein preparation ideal for studying ribosome surveillance mechanisms and No-Go Decay pathway regulation. This stable fragment maintains key functional domains, making it perfect for structural studies and biochemical assays investigating mRNA quality control processes. Protein pelota homolog (hPelota), also known as Protein Dom34 homolog, is a crucial component of the Pelota-HBS1L complex that plays a central role in ribosome quality control. This protein recognizes stalled ribosomes and initiates the No-Go Decay (NGD) pathway, a critical mRNA surveillance mechanism. hPelota specifically identifies ribosomes stalled at the 3' end of mRNAs and destabilizes mRNA within the mRNA channel. Following mRNA extraction by the SKI complex, the Pelota-HBS1L complex facilitates ABCE1 recruitment, driving disassembly of stalled ribosomes and subsequent degradation of damaged mRNAs. Additionally, hPelota participates in PINK1-regulated signaling pathways, where upon mitochondrial damage it is recruited to ribosome/mRNA-ribonucleoprotein complexes at the mitochondrial outer membrane, enabling autophagy receptor recruitment and mitophagy induction. The protein is localized in the cytoplasm, consistent with its roles in cytoplasmic translation quality control and cellular stress response pathways.