Recombinant EIF1 protein (His tag)

Catalog Number	546971
Synonyms	eIF1; A121; Protein translation factor SUI1 homolog; Sui1iso1
Species	Human
Expression System	E. coli
Accession	P41567
Molecular Weight	Predictes a molecular mass of 14.26 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15 kDa band.

Product Information

Sequence Region	2-113
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 2-113 aa (P41567) 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 Eukaryotic Translation Initiation Factor 1 (eIF1) Fragment (aa 2-113) - A high-quality recombinant protein representing a stable and soluble unit of the essential translation initiation factor eIF1, ideal for structural studies and biochemical analysis of eukaryotic translation mechanisms. Eukaryotic Translation Initiation Factor 1 (eIF1) is a critical component of the 43S pre-initiation complex in human cells, playing a fundamental role in mRNA scanning and start codon recognition during protein synthesis. This protein, encoded by the EIF1 gene, works in concert with eIF1A to facilitate ribosomal scanning along the 5'-untranslated region of mRNAs, ensuring accurate initiation codon selection based on AUG nucleotide context and position relative to the 5'-cap. eIF1 continuously monitors and prevents premature base-pairing between codons in the 5'-UTR and the anticodon of initiator tRNA, maintaining the fidelity of translation initiation. The protein localizes to the cytoplasm where it participates in the critical transition from scanning to initiation complex formation, physically excluding itself from the decoding site once the correct start codon is reached to arrest the complex. The provided fragment (amino acids 2-113) encompasses the complete functional domain of eIF1, making it suitable for investigating its structural and functional properties in translation initiation studies.