Recombinant IF1AY protein (His tag)

Catalog Number	548647
Synonyms	eIF-1A Y isoform; eIF1A Y isoform; Eukaryotic translation initiation factor 4C; eIF-4C
Species	Human
Expression System	E. coli
Accession	O14602
Molecular Weight	Predictes a molecular mass of 18.10 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band.

Product Information

Sequence Region	1-144
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 1-144 aa (O14602) 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 eIF-1A Y Isoform (EIF1AY) Fragment (aa 1-144) – a high-purity protein fragment encompassing the complete S1-like domain, ideal for investigating translation initiation mechanisms, ribosomal scanning, and start codon recognition in eukaryotic systems. The full-length Eukaryotic translation initiation factor 1A, Y-chromosomal (eIF-1A Y isoform) is a critical component of the 43S pre-initiation complex (43S PIC) in humans. It functions by binding to mRNA cap-proximal regions, facilitating scanning of the 5'-untranslated region, and promoting accurate initiation codon recognition. This protein enhances cap-proximal complex formation and, together with EIF1, aids in the assembly of the 48S complex at the start codon. It also orients initiator methionine-tRNA to enable 60S ribosomal subunit joining, leading to 80S initiation complex formation, and is released post-GTP hydrolysis by EIF5B. Localized in the cytoplasm, eIF-1A Y isoform plays a pivotal role in maintaining the open conformation of the 43S PIC during scanning, ensuring efficient translation initiation in eukaryotic cells.