

EIF5 Protein, Human (His)

Cat. No.:	HY-P75255
Synonyms:	Eukaryotic translation initiation factor 5; eIF-5
Species:	Human
Source:	E. coli
Accession:	P55010 (M1-D150)
Gene ID:	1983
Molecular Weight:	Approximately 18 kDa

PROPERTIES

AA Sequence	<p> M S V N V N R S V S D Q F Y R Y K M P R L I A K V E G K G N G I K T V I V N M V D V A K A L N R P P T Y P T K Y F G C E L G A Q T Q F D V K N D R Y I V N G S H E A N K L Q D M L D G F I K K F V L C P E C E N P E T D L H V N P K K Q T I G N S C K A C G Y R G M L D T H H K L C T F I L K N P P E N S D </p>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>EIF5 serves as a crucial component of the 43S pre-initiation complex (43S PIC), participating in the initiation of protein synthesis. Within this complex, EIF5 plays a key role in mRNA scanning, start codon recognition, and GTP hydrolysis. Acting as a GTPase-activating protein, EIF5 promotes the hydrolysis of GTP by eIF2G (EIF2S3). During the scanning process, EIF5 interacts with both EIF1 and EIF1A, contributing to the maintenance of EIF1 within the open 43S PIC. Upon recognition of the start codon, EIF5 induces eIF2G (EIF2S3) to hydrolyze GTP and initiates a conformational change in the PIC to a closed state. This change enhances the affinity of EIF5-CTD for EIF2-beta (EIF2S2), leading to the release of EIF1 from the PIC. Finally, EIF5 stabilizes the PIC in its closed conformation. EIF5 interacts with various components of the translation machinery, including EIF1A, EIF2-beta (EIF2S2), and EIF5B, as well as with FMR1 isoform 6 in a RNA-dependent manner,</p>
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highlighting its multifaceted involvement in protein synthesis initiation.

Caution: Product has not been fully validated for medical applications. For research use only.

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