

EIF5 Protein, Human (His-SUMO)

Cat. No.:	HY-P700566
Synonyms:	2810011H21Rik; D12Ertd549e; EIF 5; EIF 5A; eIF-5; Eif5; Eukaryotic initiation factor 5; Eukaryotic translation initiation factor 5; IF5_HUMAN; MGC36374; MGC36509
Species:	Human
Source:	E. coli
Accession:	P55010 (M1-I431)
Gene ID:	1983
Molecular Weight:	65.2 kDa

PROPERTIES

AA Sequence

MSVNVNRSVS	DQFYRYKMPR	LI AKVEGKGN	G I K T V I V N M V
DVAKALNRPP	TYPTKYFGCE	LGAQTQFDVK	NDRYIVNGSH
EANKLQDMLD	GFIKKFVLCF	ECENPETDLH	VNPKKQTIGN
SCKACGYRGM	LDTHHKLCTF	ILKNPPENS	SGTGKKEKEK
KNRK GKDKEN	GSVSSSETPP	PPPPNEINP	PPHTMEEEED
DDWGEDTTEE	AQRRRMDEIS	DHAKVLTLS	DLERTIEERV
NILFD FVKKK	KEEGVIDSSD	KEIVAEAERL	DVKAMGPLVL
TEVLFNEKIR	EQIKKYRRHF	LRFCHNNKKA	QRYLLHGLEC
VVAMHQAQLI	SKIPHILKEM	YDADLLEEEV	IISWSEKASK
KYVSKELAKE	IRVKAEPFIK	WLKEAEEESS	GGEEDEDEDEN
IEVVYSKAAS	VPK VETV KSD	NKDDDDIDIDA	I

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

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 ddH₂O.

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

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, highlighting its multifaceted involvement in protein synthesis initiation.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA