EIF4G1 Protein, Human (P.pastoris, His)

Cat. No.:	HY-P71731
Synonyms:	eIF 4 gamma 1; eIF 4G 1; eIF 4G1; eIF-4-gamma 1; EIF4G; Eukaryotic translation initiation factor 4 gamma 1
Species:	Human
Source:	P. pastoris
Accession:	Q04637 (1250I-1599N)
Gene ID:	1981
Molecular Weight:	Approximately 41.6 kDa

PROPERTIES

AA Sequence	I E E Y L H L N D M K E A V Q C V Q E L A S P S L L F I F V R H G V E S T L E R S A I A R E H M G Q L L H Q L L C A G H L S T A Q Y Y Q G L Y E I L E L A E D M E I D I P H V W L Y L A E L V T P I L Q E G G V P M G E L F R E I T K P L R P L G K A A S L L L E I L G L L C K S M G P K K V G T L W R E A G L S W K E F L P E G Q D I G A F V A E Q K V E Y T L G E E S E A P G Q R A L P S E E L N R Q L E K L L K E G S S N Q R V F D W I E A N L S E Q Q I V S N T L V R A L M T A V C Y S A I I F E T P L R V D V A V L K A R A K L L Q K Y L C D E Q K E L Q A L Y A L Q A L V V T L E Q P P N L L R M F F D A L Y D E D V V K E D A F Y S W E S S K D P A E Q Q G K G V A L K S V T A F F K W L R E A E E E S D H N
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	EIF4G1, a vital component of the eIF4F protein complex, plays a crucial role in the translation initiation process. Within the eIF4F complex, which recognizes the mRNA cap and facilitates mRNA recruitment to the ribosome, EIF4G1 exists in two mutually exclusive complexes, either with EIF1 or with EIF4E. When partnered with EIF1, EIF4G1 is essential for leaky scanning, particularly in avoiding cap-proximal start codons. Alternatively, when associated with EIF4E, EIF4G1 counteracts

scanning promoted by EIF1-EIF4G1 and positions the start codon through a TISU element without scanning. As part of the eIF4F complex, EIF4G1 is required for endoplasmic reticulum stress-induced ATF4 mRNA translation. This multi-subunit eIF4F complex, with varying composition based on environmental conditions, includes EIF4A, EIF4E (cap-binding), and EIF4G1/EIF4G3. EIF4G1 interacts with the eIF3 complex, EIF4A1 or EIF4A2, EIF4E, and PABPC1. It interacts either with EIF4E or with EIF1 through a common binding site. Acting as a scaffold protein, EIF4G1 interacts with serine/threonine kinases MKNK1 and MKNK2 to facilitate EIF4E phosphorylation. Additionally, EIF4G1 engages in interactions with EIF4E3, CIRBP, MIF4GD, RBM4, HNRNPD/AUF1, DDX3X, and DAZAP2, highlighting its intricate involvement in translational regulation and mRNA circularization.

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