# EIF3G Protein, Human (His-SUMO)

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| **Cat. No.:** | HY-P700506 |
| **Synonyms:** | eukaryotic translation initiation factor 3 subunit G; EIF3S4; EIF3-P42; eIF3-p44; eIF3-delta; eukaryotic translation initiation factor 3 subunit G; eukaryotic translation initiation factor 3 RNA-binding subunit; eukaryotic translation initiation factor 3 subunit p42; eukaryotic translation initiation factor 3, subunit 4 delta, 44kDa |
| **Species:** | Human |
| **Source:** | E. coli |
| **Accession:** | O75821 (P2-N320) |
| **Gene ID:** | 8666 |
| **Molecular Weight:** | 51.5 kDa |

## PROPERTIES

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| **AA Sequence** | P T G D F D S K P S W A D Q V E E E G E D D K C V T S E L L K G I P L A T G D T<br>S P E P E L L P G A P L P P P K E V I N G N I K T V T E Y K I D E D G K K F K I<br>V R T F R I E T R K A S K A V A R R K N W K K F G N S E F D P P G P N V A T T T<br>V S D D V S M T F I T S K E D L N C Q E E E D P M N K L K G Q K I V S C R I C K<br>G D H W T T R C P Y K D T L G P M Q K E L A E Q L G L S T G E K E K L P G E L E<br>P V Q A T Q N K T G K Y V P P S L R D G A S R R G E S M Q P N R R A D D N A T I<br>R V T N L S E D T R E T D L Q E L F R P F G S I S R I Y L A K D K T T G Q S K G<br>F A F I S F H R R E D A A R A I A G V S G F G Y D H L I L N V E W A K P S T N |
| **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. |
| **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

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| **Background** | The EIF3G protein functions as an RNA-binding component within the eukaryotic translation initiation factor 3 (eIF-3) complex, a crucial player in various steps of protein synthesis initiation. The eIF-3 complex, associated with the 40S ribosome, facilitates the recruitment of essential factors, such as eIF-1, eIF-1A, eIF-2:GTP:methionyl-tRNAi, and eIF-5, to form the 43S pre-initiation complex (43S PIC). Subsequently, EIF3G, as part of the eIF-3 complex, promotes mRNA recruitment to |

the 43S PIC and scanning for AUG recognition. Furthermore, it plays a key role in the disassembly and recycling of post-termination ribosomal complexes, preventing premature joining of the 40S and 60S ribosomal subunits before initiation. The eIF-3 complex, including EIF3G, selectively targets and initiates translation of specific mRNAs involved in cell proliferation, influencing processes like cell cycling, differentiation, and apoptosis. Through different modes of RNA stem-loop binding, EIF3G can exert either translational activation or repression. In the context of microbial infection, such as FCV infection, EIF3G is implicated in the ribosomal termination-reinitiation event leading to the translation of specific viral proteins.



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