

EEF1A1 Protein, Human (His-SUMO)

Cat. No.:	HY-P72178
Synonyms:	CCS 3; CCS3; Cervical cancer suppressor 3; chunp6927; CTCL tumor antigen; EE1A1; EEF 1; EEF1A; eEF1A-1; EEF1A1; EF-1-alpha-1; EF-Tu; EF1A; EF1a like protein; EF1A1_HUMAN; Elongation factor 1-alpha 1; Elongation factor Tu; GRAF 1EF; HNGC:16303; ik:tdsubc_2a3; ik:tdsubc_2b3; LENG7; member 7; PT11; tdsbuc_2a3; wu:fa91c07; wu:fa94b03; wu:fi13b09; xx:tdsubc_2a3; xx:tdsubc_2b3
Species:	Human
Source:	E. coli
Accession:	P68104 (M1-K462)
Gene ID:	1915
Molecular Weight:	Approximately 66.1 kDa

PROPERTIES

AA Sequence	<pre> MGKEKTHINI VVIGHVDSGK STTTGHLIYK CGGIDKRTIE KFEKEAAEMG KGSFKYAWVL DKLKAERERG ITIDISLWKF ETSKYYVTII DAPGHRDFIK NMITGTSQAD CAVLIVAAGV GEFEAGISKN GQTREHALLA YTLGVKQLIV GVNKMDSTEP PYSQKRYEEI VKEVSTYIKK IGYNPDTVAF VPISGWNGDN MLEPSANMPW FKGWKVTRKD GNASGTTLE ALDCILPPTR PTDKPLRRLPL QDVYKIGGIG TVPVGRVETG VLKPGMVVTF APVNVTTTEVK SVEMHHEALS EALPGDNVGF NVKNVSVKDV RRGNVAGDSK NDPPMEAAAGF TAQVILLNHP GQISAGYAPV LDCHTAHIAC KFAELKEKID RRSKGKLEDG PKFLKSGDAA IVDMVPGKPM CVESFSDYPP LGRFAVRDMR QTVAVGVIIKA VDKKAAGAGK VTKSAQKAQK AK </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm sterile filtered PBS, 6% Trehalose, 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.
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

EEF1A1, a translation elongation factor, plays a crucial role in protein synthesis by catalyzing the GTP-dependent binding of aminoacyl-tRNA (aa-tRNA) to the A-site of ribosomes during the elongation phase. This process involves base pairing between the mRNA codon and the aa-tRNA anticodon, leading to GTP hydrolysis and the subsequent release of aa-tRNA from EEF1A1. The freed aa-tRNA is then accommodated into the ribosome, facilitating the extension of the growing protein chain through ribosome-catalyzed peptide bond formation. Beyond its core translational function, EEF1A1 participates in the positive regulation of IFNG transcription in T-helper 1 cells, forming an IFNG promoter-binding complex with TXK and PARP1. Moreover, in the context of microbial infection, EEF1A1 is essential for the translation of viral proteins and the replication of human coronavirus SARS-CoV-2, highlighting its critical role in both cellular and pathogenic translational processes.

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

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