

## EIF5 Protein, Human, Recombinant (GST)

### General Information

Synonyms:	EIF-5A;eukaryotic translation initiation factor 5;EIF-5
Protein Construction:	A DNA sequence encoding the mature form of human EIF5 (P55010) (Met1-Asp150) was fused with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P55010
Molecular Weight:	44.1 kDa (predicted); 38-43 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**  
It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**  
In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

EIF-5A, also known as EIF5, functions in start site selection as a GTPase accelerating protein (GAP) for the eukaryotic translation initiation factor (eIF) 2•GTP•tRNA ternary complex within the ribosome-bound pre-initiation complex. In protein synthesis initiation, eIF2 functions in its GTP-bound state to deliver initiator methionyl-tRNA to the small ribosomal subunit and is necessary for protein synthesis in all cells. EIF-5A stabilizes the binding of GDP to eIF2 and is therefore a bi-functional protein that acts as a GDP dissociation inhibitor (GDI). EIF-5A also interacts

with eIF1 and eIF3 and binds the eIF2-GTP/Met-tRNA ternary complex along with the 40S ribosome subunit.

### Reference

Si K, et al. (1996) Characterization of multiple mRNAs that encode mammalian translation initiation factor 5 (eIF-5). J Biol Chem. 271(28):16934.

Das S, et al. (1998) Specific interaction of eukaryotic translation initiation factor 5 (eIF5) with the beta-subunit of eIF2. J Biol Chem. 273(50):31712-8.

Conte MR, et al. (2006) Structure of the eukaryotic initiation factor (eIF) 5 reveals a fold common to several translation factors. Biochemistry. 45(14):4550-8.

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