

Active Recombinant Human EIF2A

Cat. No. EIF2A-30H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Eukaryotic Initiation Factor 2-alpha produced in Sf9 is a non-glycosylated, polypeptide chain having a molecular mass of 36 kDa. EIF2 is purified by proprietary chromatographic techniques.
Species	Human
Source	Sf9 Cells
Description	The translation initiation factor eIF2 catalyzes the first regulated step of protein synthesis initiation, promoting the binding of the initiator tRNA to 40S ribosomal subunits. Binding occurs as a ternary complex of methionyl-tRNA, eIF2, and GTP. eIF2 is composed of 3 nonidentical subunits, alpha (36 kD), beta (38 kD, MIM 603908), and gamma (52 kD, MIM 300161). The rate of formation of the ternary complex is modulated by the phosphorylation state of eIF2-alpha (Ernst et al., 1987).
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 95% as determined by SDS-PAGE.
Formulation	EIF2A is supplied as lyophilized freeze dry powder without additives.
Reconstitution Recommendation	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute lyophilized recombinant human eIF2-α in phosphate buffered saline, to a concentration of 0.2-1.0 mg/mL. Following reconstitution, the protein solution should be supplemented with 1mM β-

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mercaptoethanol (final concentration) and 10% glycerol (final concentration) to prevent precipitation.

Activity

Recombinant human eIF2- α is phosphorylatable in vitro, using either immunoprecipitated active PKR or extracts from IFN- γ stimulated HEK 293 cells. This phosphorylation can be monitored by Western blot analysis using phosphorylation site specific antibody directed to eIF2- α [pS51] in conjunction with chemiluminescence detection methods. Please note: Kinase activity may vary depending on the substrate and reaction conditions.

Storage

Store at 4°C if entire vial will be used within 1-2 weeks. Store, frozen at -20°C for longer periods of time. Avoid multiple freeze-thaw cycles.

GENE INFORMATION

Gene Name

EIF2A eukaryotic translation initiation factor 2A, 65kDa [Homo sapiens]

Synonyms

EIF2A; eukaryotic translation initiation factor 2A, 65kDa; CDA02; EIF-2A; MST089; MSTP004; MSTP089; 65 kDa eukaryotic translation initiation factor 2A; eukaryotic translation initiation factor 2A

Gene ID

83939

mRNA Refseq

NM_032025

Protein Refseq

NP_114414

UniProt ID

Q9BY44

**Chromosome
Location**

3q25.1

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MIM	609234
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Function	ribosome binding; tRNA binding; translation initiation factor activity
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