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Product Information

EIF2S1, HIS-tagged, human
recombinant, expressed in *E. coli* cells

Catalog Number **SRP5232**
Storage Temperature –70 °C

Synonyms: EIF-2, EIF-2A, EIF-2alpha, EIF2, EIF2A

Product Description

EIF2S1, also known as eukaryotic translation initiation factor 2, subunit 1 alpha, is a 35 kDa protein in which the translation initiation factor EIF2 catalyzes the first regulated step of protein synthesis initiation and promotes the binding of the initiator tRNA to 40S ribosomal subunits. Binding occurs as a ternary complex of methionyl-tRNA, EIF2, and GTP.[1] Ser^{51} in the mature human EIF2-alpha protein acts as the sole site of phosphorylation that leads to repression of protein synthesis. EIF2-alpha also plays an essential role in erythropoiesis.[2]

Recombinant, full-length, human EIF2S1 was expressed in *E. coli* cells using an N-terminal His tag. The gene accession number is NM_004094. Recombinant protein stored in 50 mM sodium phosphate, pH 7.0, 300 mM NaCl, 150 mM imidazole, 0.1 mM PMSF, 0.2 5 mM DTT, and 25% glycerol

Molecular mass: ~40 kDa

Purity: 70–95% (SDS-PAGE, see Figure 1)

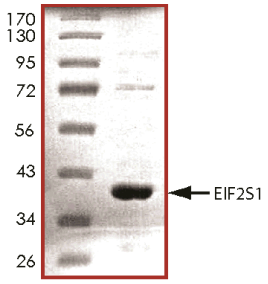
Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at –70 °C is recommended. After opening, aliquot into smaller quantities and store at –70 °C. Avoid repeated handling and multiple freeze/thaw cycles.

Figure 1.
SDS-PAGE Gel of Typical Lot
70–95% (densitometry)



References

1. Ernst, H. et.al., Cloning and sequencing of complementary DNAs encoding the alpha-subunit of translational initiation factor eIF-2: characterization of the protein and its messenger RNA. J. Biol. Chem., **262**, 1206-1212 (1987).
2. Pathak, V. K.et.al., Generation of a mutant form of protein synthesis initiation factor eIF-2 lacking the site of phosphorylation by eIF-2 kinases. Molec. Cell. Biol., **8**, 993-995 (1988).

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