

# Recombinant human eIF-2 alpha/EIF2S1 protein

Catalog Number: ATGP0581

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-315aa

### UniProt No.

P05198

### NCBI Accession No.

NP\_004085.1

### Alternative Names

Eukaryotic translation initiation factor 2 subunit alpha, EIF2, Eukaryotic translation initiation factor 2 subunit 1 alpha 35kDa, EIF-2alpha, EIF2A

## PRODUCT SPECIFICATION

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### Molecular Weight

38.2 kDa (335aa) confirmed by MALDI-TOF

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol 0.1M NaCl

### Purity

> 85% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

EIF2S1, also known as eIF2 alpha, is the alpha subunit of the translation initiation factor eIF2 complex which catalyzes the first regulated step of protein synthesis initiation, promoting the binding of the initiator tRNA to 40S ribosomal subunits. The phosphorylation state of eIF2S1 controls the rate of tRNA translation. When eIF2 alpha is not phosphorylated, translation occurs at a normal rate. However, upon phosphorylation by one of several kinases, eIF2S1 is stabilized, thus preventing the GDP/GTP exchange reaction and slowing translation.

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Recombinant human EIF2S1 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

## Amino acid Sequence

<MGSSHHHHHH SSGLVPRGSH> MPGLSCRFYQ HKFPEVEDVV MVNVRSAEM GAYVSLLEYN NIEGMILLSE LSRRRIRSIN  
KLIRIGRNEC VVIRVDKEK GYIDLSKRRV SPEEAIKCED KFTKSKTVYS ILRHVAEVLE YTKDEQLESL FORTAWVFDD  
KYKRPGYGAY DAFKHAVSDP SILDSLNE DEREVLINNI NRRLTPQAVK IRADIEVACY GYEGIDAVKE ALRAGLNCST  
ENMPIKINLI APPRYVMTT TLERTEGLSV LSQAMAVIKE KIEEKRGVFN VQMEPKVVTD TDETELARQM ERLERENA EV  
DGDDDAEEME AKAED

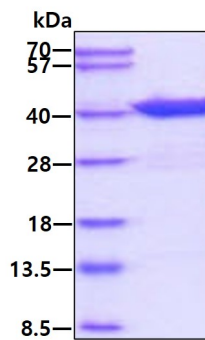
## General References

Scheuner D, et al. (2005) Nat Med. 11(7):757-64

Boyce M. et al. (2005) Science. 307(5711):935-9

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.