Creative Enzymes®

protein-synthesizing GTPase

Cat. No. EXWM-4714

Lot. No. (See product label)

Introduction

Description This enzyme comprises a family of proteins involved in prokaryotic as well as eukaryotic protein synthesis. In the initiation factor complex, it is IF-2b (98 kDa) that binds GTP and subsequently hydrolyses it in prokaryotes. In eukaryotes, it is eIF-2 (150 kDa) that binds GTP. In the elongation phase, the GTP-hydrolysing proteins are the EF-Tu polypeptide of the prokaryotic transfer factor (43 kDa), the eukaryotic elongation factor EF-1α (53 kDa), the prokaryotic EF-G (77 kDa), the eukaryotic EF-2 (70-110 kDa) and the signal recognition particle that play a role in endoplasmic reticulum protein synthesis (325 kDa). EF-Tu and EF-1α catalyse binding of aminoacyl-tRNA to the ribosomal A-site, while EF-G and EF-2 catalyse the translocation of peptidyl-tRNA from the A-site to the P-site. GTPase activity is also involved in polypeptide release from the ribosome with the aid of the pRFs and eRFs.

Synonyms elongation factor (EF); initiation factor (IF); peptide-release or termination factor

Product Information

Form Liquid or lyophilized powder

EC Number EC 3.6.5.3

Reaction GTP + H2O = GDP + phosphate

Notes This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.