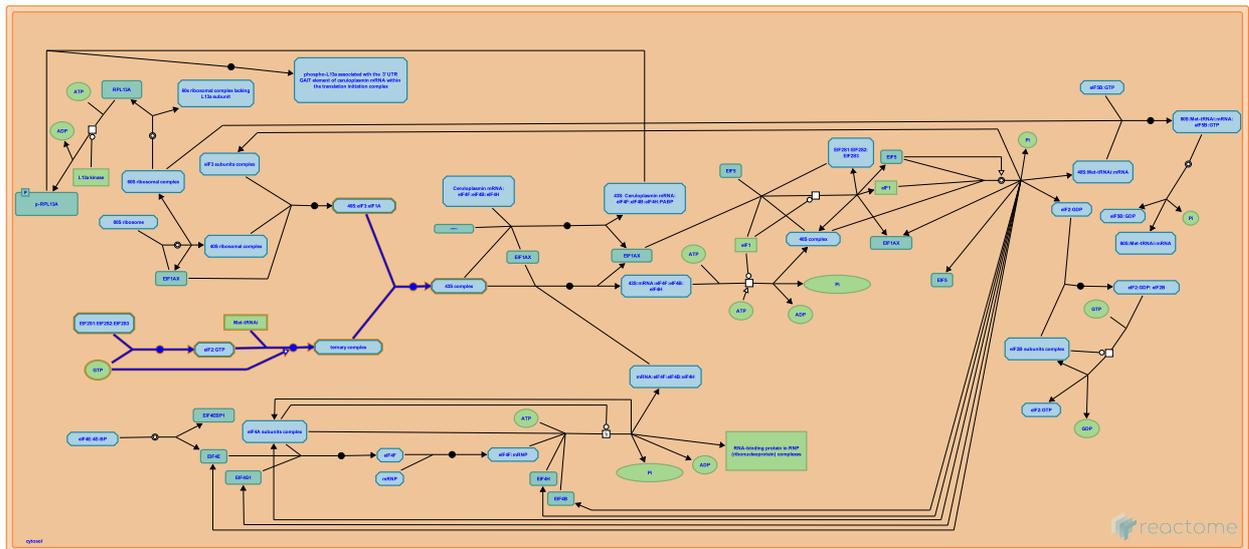


Formation of the ternary complex, and subsequently, the 43S complex



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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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Reactome database release: 70

This document contains 1 pathway and 3 reactions ([see Table of Contents](#))

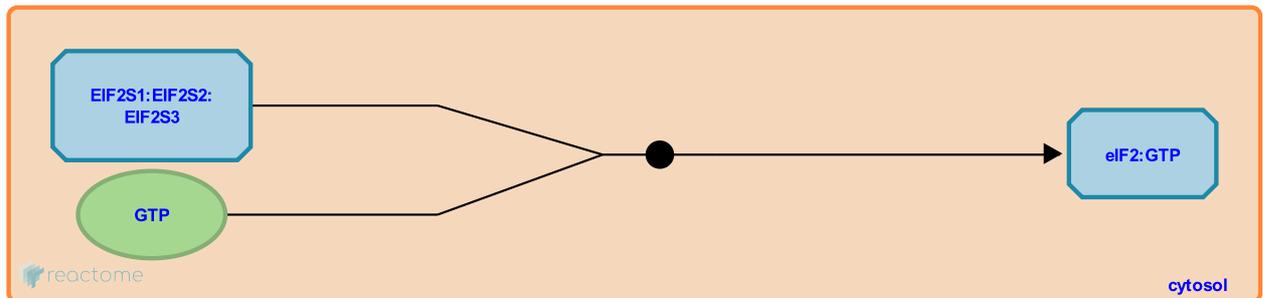
De novo formation of eIF2:GTP ↗

Location: Formation of the ternary complex, and subsequently, the 43S complex

Stable identifier: R-HSA-72663

Type: binding

Compartments: cytosol



Activation of eIF2 through direct binding of GTP.

Followed by: Met-tRNA_i binds to eIF2:GTP to form the ternary complex

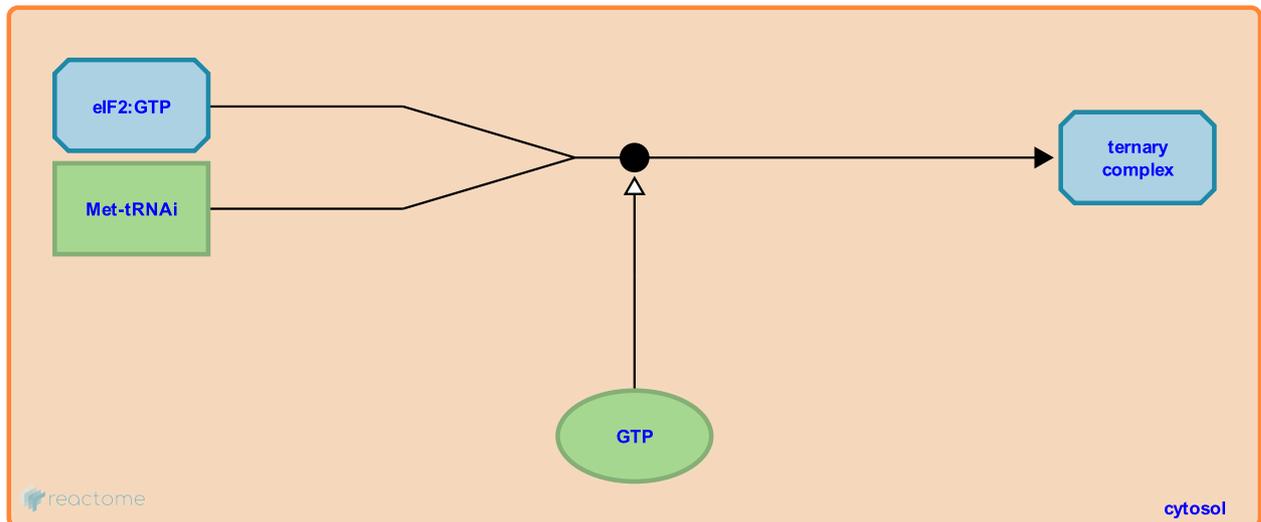
Met-tRNAⁱ binds to eIF2:GTP to form the ternary complex ↗

Location: Formation of the ternary complex, and subsequently, the 43S complex

Stable identifier: R-HSA-72669

Type: binding

Compartments: cytosol



The ternary complex forms upon binding of the initiator methionyl-tRNA to the active eIF2:GTP complex.

Preceded by: De novo formation of eIF2:GTP

Followed by: Formation of the 43S pre-initiation complex

Literature references

Safer, B., Adams, S.L., Anderson, W.F., Merrick, W.C. (1976). Binding of MET-TRNA^f and GTP to homogeneous initiation factor MP. *J Biol Chem*, 250, 9076-82. ↗

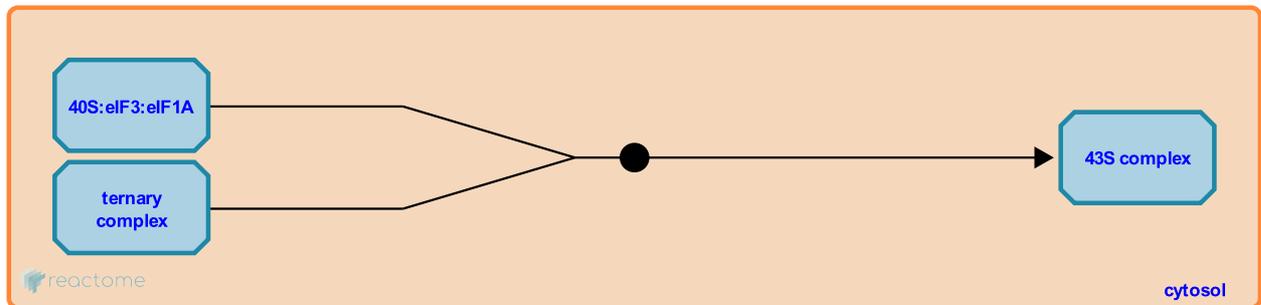
Formation of the 43S pre-initiation complex ↗

Location: Formation of the ternary complex, and subsequently, the 43S complex

Stable identifier: R-HSA-72691

Type: binding

Compartments: cytosol



The ternary complex (Met-tRNA_i:eIF2:GTP) binds to the complex formed by the 40S subunit, eIF3 and eIF1A, to form the 43S complex. eIF1A promotes binding of the ternary complex to the 40S subunit within 43S. The initiator methionyl-tRNA from the ternary complex is positioned at the ribosomal P site.

Preceded by: Met-tRNA_i binds to eIF2:GTP to form the ternary complex

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