Eukaryotic Translation Termination

Bedwell, DM., D'Eustachio, P., Gillespie, ME., Jassal, B.
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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Literature references


Reactome database release: 72

This document contains 1 pathway and 5 reactions (see Table of Contents)
Eukaryotic Translation Termination

Stable identifier: R-HSA-72764

Compartments: cytosol

The arrival of any of the three stop codons (UAA, UAG and UGA) into the ribosomal A-site triggers the binding of a release factor (RF) to the ribosome and subsequent polypeptide chain release. In eukaryotes, the RF is composed of two proteins, eRF1 and eRF3. eRF1 is responsible for the hydrolysis of the peptidyl-tRNA, while eRF3 provides a GTP-dependent function. The ribosome releases the mRNA and dissociates into its two complex subunits, which can reassemble on another molecule to begin a new round of protein synthesis. It should be noted that at present, there is no factor identified in eukaryotes that would be the functional equivalent of the bacterial ribosome release (or recycling) factor, RRF, that catalyzes dissociation of the ribosome from the mRNA following release of the polypeptide.

Literature references


Editions

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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>2004-11-09</td>
<td>Authored</td>
<td>Bedwell, DM.</td>
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<tr>
<td>2020-02-28</td>
<td>Edited</td>
<td>Gillespie, ME.</td>
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N6AMT1:TRMT112 transfers CH3 group from AdoMet to ETF1 dimer

Location: Eukaryotic Translation Termination

Stable identifier: R-HSA-6800138