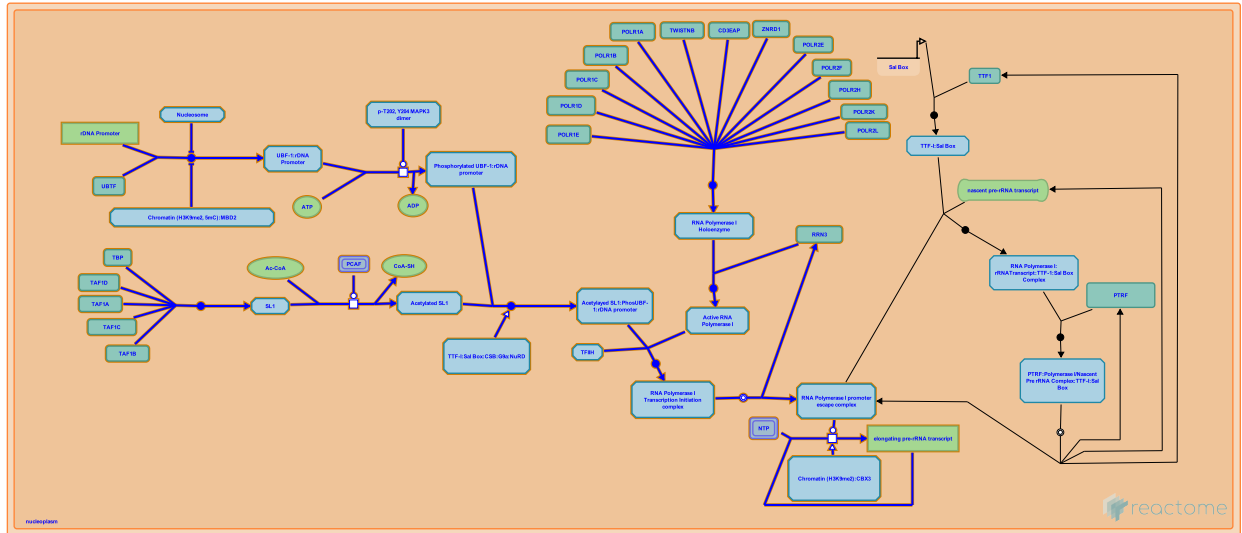


RNA Polymerase I Promoter Clearance



Comai, L., Gillespie, ME.

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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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

Literature references

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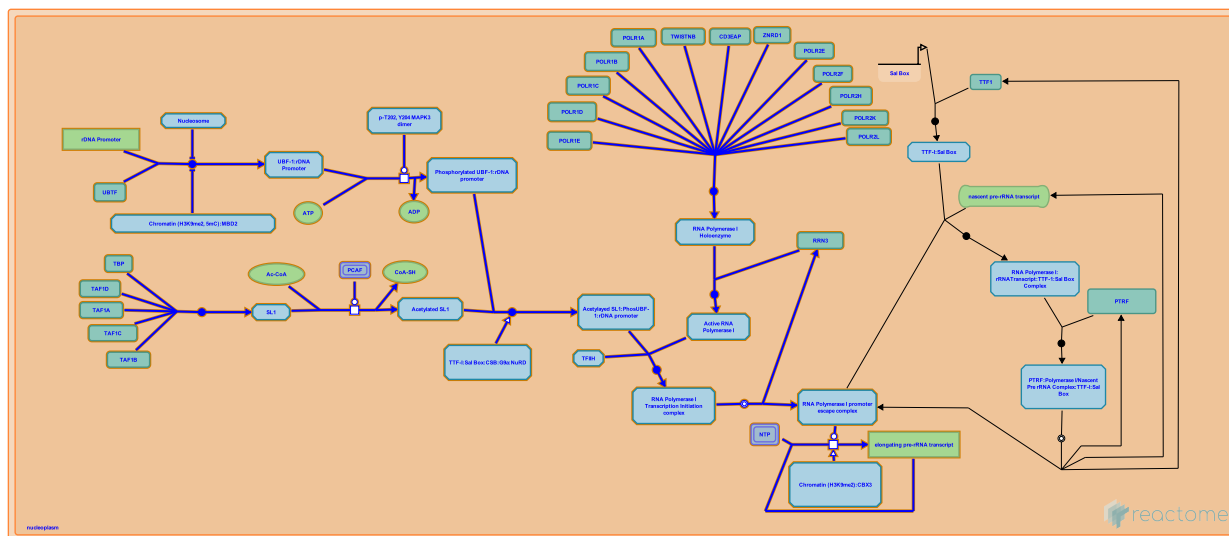
Reactome database release: 75

This document contains 4 pathways ([see Table of Contents](#))

RNA Polymerase I Promoter Clearance [↗](#)

Stable identifier: R-HSA-73854

Compartments: nucleolus



Promoter clearance is one of the rate-limiting steps in Polymerase I transcription. This step is composed of three phases, promoter opening, transcription initiation and promoter escape.

Literature references

Comai, L. (2004). Mechanism of RNA polymerase I transcription. *Adv. Protein Chem.*, 67, 123-55. [↗](#)

Editions

2003-07-03

Authored

Comai, L.

2020-11-17

Edited

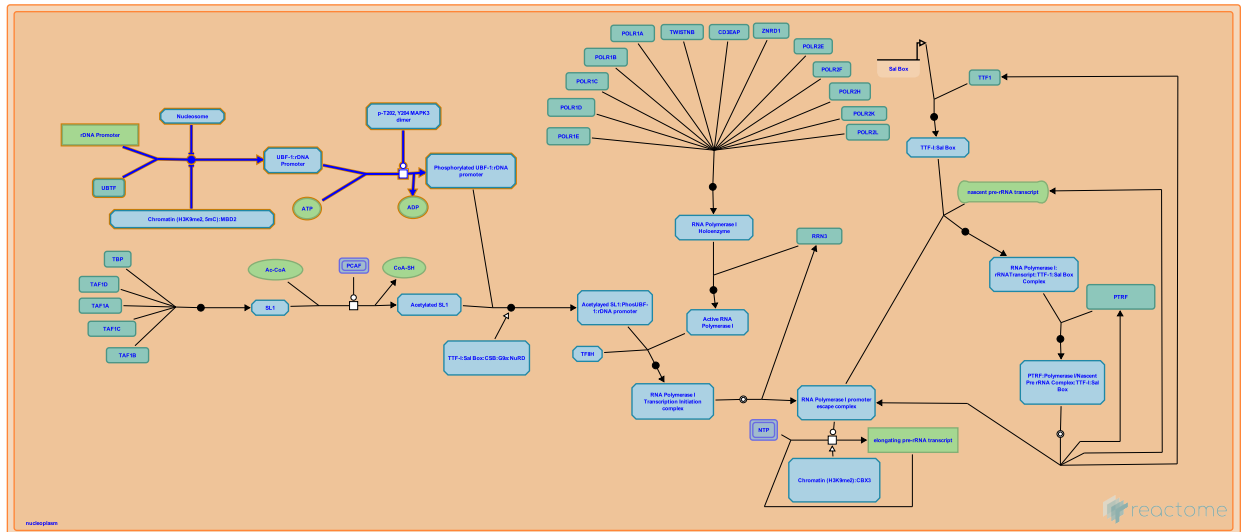
Gillespie, ME.

RNA Polymerase I Promoter Opening ↗

Location: RNA Polymerase I Promoter Clearance

Stable identifier: R-HSA-73728

Compartments: nucleolus



The activity of the upstream binding factor (UBF-1) plays an important role in the regulation of rRNA synthesis. Studies reveal that phosphorylation of UBF-1 is required for its interaction with the RNA polymerase I complex, suggesting that phosphorylation of UBF-1 bound to the rDNA promoter during promoter opening modulates the assembly of the transcription initiation complex.

Editions

2003-07-03	Authored	Comai, L.
2020-11-17	Edited	Gillespie, ME.

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