RNA Polymerase III Abortive Initiation

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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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Literature references

Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics, 18*, 142. ↗

Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics, 33*, 3461-3467. ↗

Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res, 46*, D649-D655. ↗

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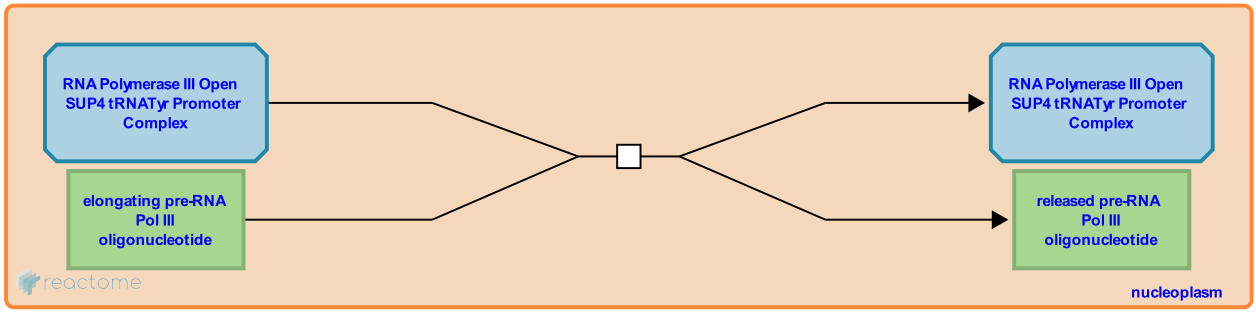
Stable identifier: R-SCE-111943

Type: transition

Compartments: nucleoplasm



Abortive initiation, the repetitive formation of short oligonucleotides, is a ubiquitous feature of transcriptional initiation. For pol III, it has been analyzed only in S. cerevisiae (Bhargava and Kassavetis, 1999). The released products of abortive initiation, principally di- and tri-nucleotides, indicate the participation of retractive endonucleolytic cleavage of these initially forming abortive products. The transition from abortive to productive transcription may occur at bp +5.

Literature references

Bhargava, P., Kassavetis, GA. (1999). Abortive initiation by Saccharomyces cerevisiae RNA polymerase III. *J Biol Chem, 274*, 26550-6. ↗

Editions

2004-03-29	Authored	Geiduschek, EP.
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