

ERCC6 binds stalled RNA Pol II

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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. [↗](#)

Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

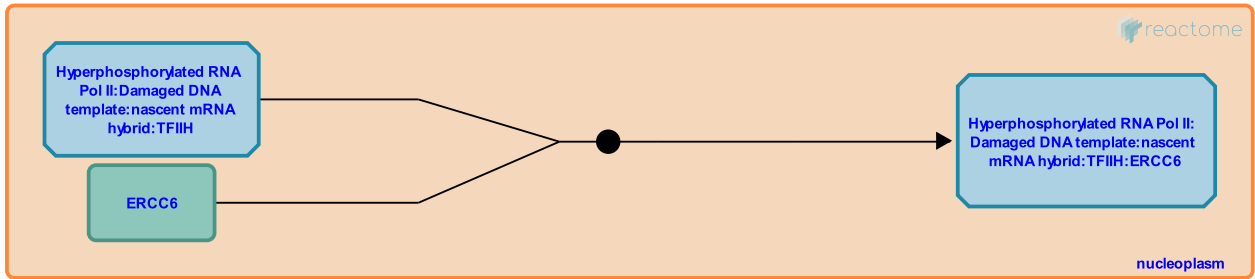
This document contains 1 reaction ([see Table of Contents](#))

ERCC6 binds stalled RNA Pol II ↗

Stable identifier: R-HSA-6781840

Type: binding

Compartments: nucleoplasm



Cockayne syndrome protein B (ERCC6, also known as CSB) binds RNA polymerase II complex (RNA Pol II) stalled at a DNA damage site and is required for the subsequent recruitment of ERCC8 (CSA) (Kamiuchi et al. 2002, van der Weegen et al. 2020).

Literature references

González-Prieto, R., Golan-Berman, H., Adar, S., van den Heuvel, D., Luijsterburg, MS., van der Weegen, Y. et al. (2020). The cooperative action of CSB, CSA, and UVSSA target TFIIH to DNA damage-stalled RNA polymerase II. *Nat Commun*, 11, 2104. ↗

Kamiuchi, S., Tanaka, K., de Jager, M., Saijo, M., Citterio, E., Hoeijmakers, JH. (2002). Translocation of Cockayne syndrome group A protein to the nuclear matrix: possible relevance to transcription-coupled DNA repair. *Proc Natl Acad Sci U S A*, 99, 201-6. ↗

Editions

2004-01-29	Authored	Gopinathrao, G., Hoeijmakers, JH.
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