E2F7 and E2F8 homo- and heterodimers inhibit E2F1 expression

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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

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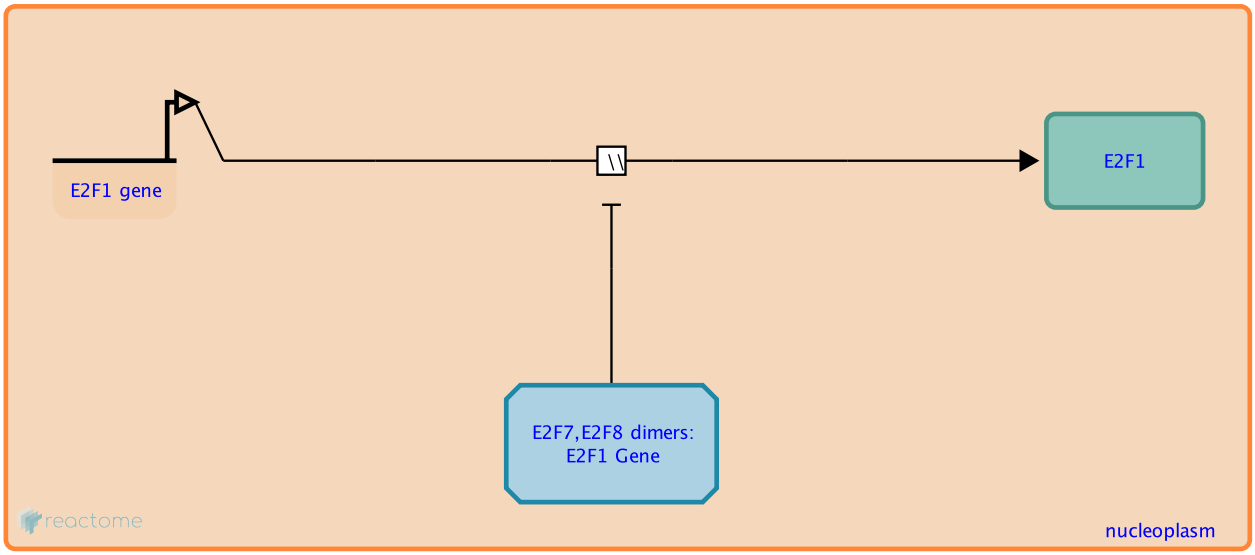
Stable identifier: R-HSA-6798353

Type: omitted

Compartments: nucleoplasm



Upon binding to E2F elements in the promoter of the E2F1 gene, E2F7 represses transcription of E2F1 (Di Stefano et al. 2003, Li et al. 2008, Zalmas et al. 2008, Carvajal et al. 2012). E2F1 transcription is also directly repressed by E2F8. E2F7 and E2F8 bind to the E2F1 gene promoter as homo- or heterodimers (Li et al. 2008, Zalmas et al. 2008). E2F7- and E2F8-mediated repression of E2F1 transcription is an important step in the DNA damage induced cell cycle arrest (Zalmas et al. 2008). E2F8-mediated repression of the E2F1 gene is involved in the polyploidization of hepatocytes during liver development (Pandit et al. 2012). Loss of E2F7 and E2F8 triggers apoptosis via induction of E2F1 in response to stress (Li et al. 2008, Thurlings et al. 2016).

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Editions

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