Expression of SERPINE1 (PAI-1)

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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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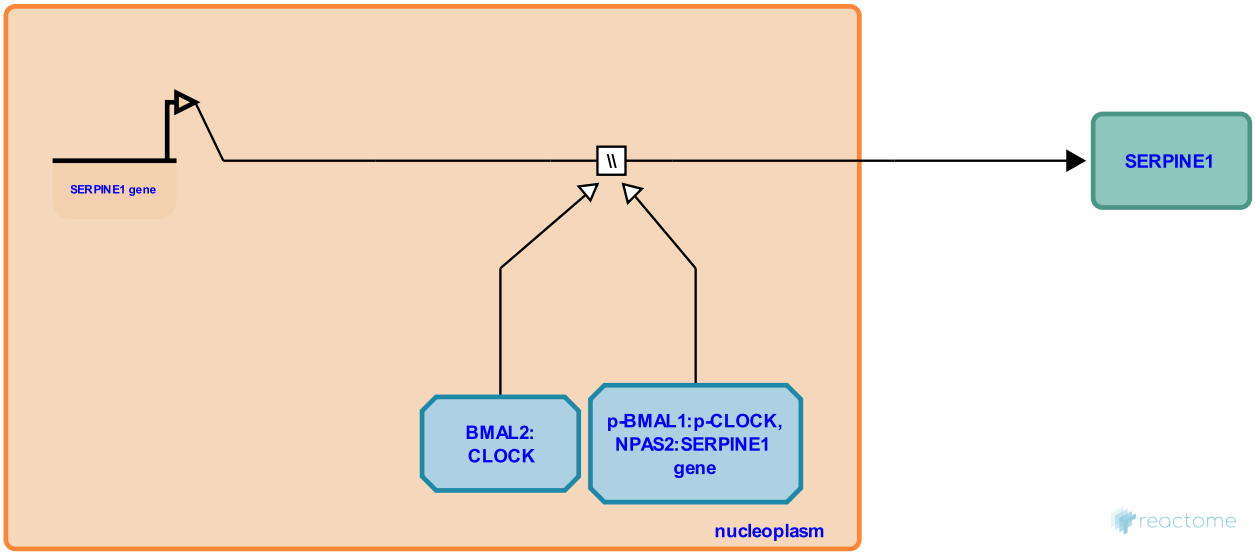
Stable identifier: R-HSA-549364

Type: omitted

Compartments: nucleoplasm, extracellular region



The phosphorylated BMAL1:CLOCK (ARNTL) heterodimer binds an E-box in the promoter of the PAI-1 gene and activate transcription of PAI-1. NPAS2 is predicted to act redundantly with CLOCK.
The PAI-1 gene is transcribed to yield mRNA and the mRNA is translated to yield protein. The PAI-1 gene shows circadian expression due to direct transcriptional activation by the BMAL1:CLOCK (ARNTL:CLOCK) heterodimer and the BMAL2:CLOCK (CLIF:CLOCK, ARNTL2:CLOCK) heterodimer.
BMAL2 (ARNTL2, CLIF) forms a heterodimer with CLOCK, binds E-boxes in the PAI-1 promoter and activates transcription of the PAI-1 gene. BMAL2 shows constitutive rather than circadian expression.

Literature references

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Editions

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