

Expression of DEC2 (BHLHE41, BHLHB3)

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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](#))

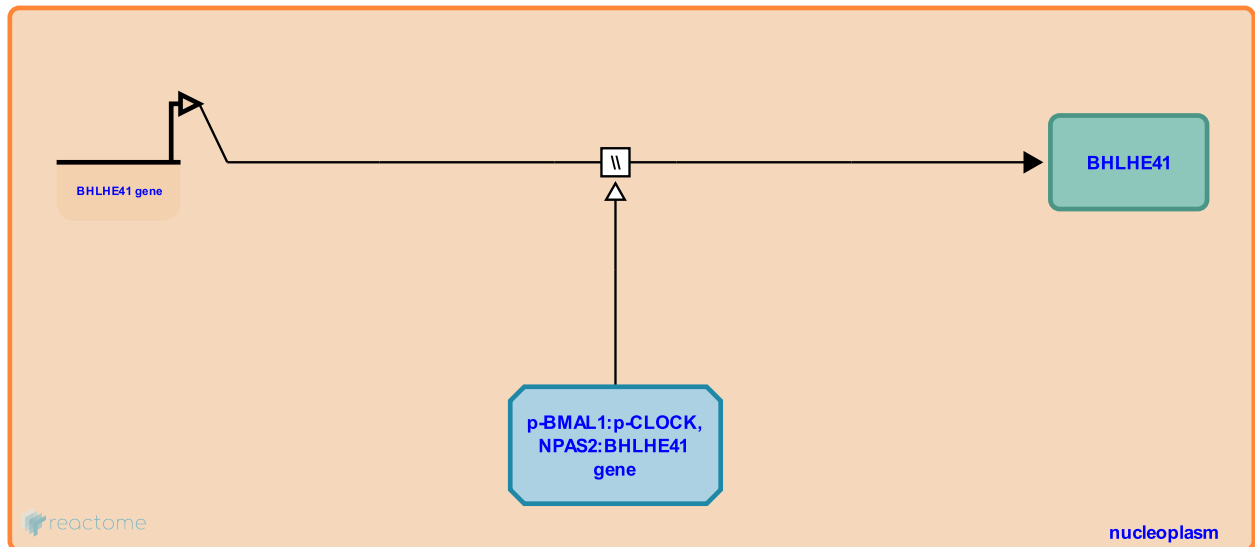
Expression of DEC2 (BHLHE41, BHLHB3) ↗

Stable identifier: R-HSA-879770

Type: omitted

Compartments: nucleoplasm

Inferred from: [Expression of Dec2 \(Bhlhe41, Bhlhb3\) \(Mus musculus\)](#)



The DEC2 (BHLHE41, BHLHB3) gene is transcribed to yield mRNA and the mRNA is translated to yield protein. As inferred from mouse, the BMAL1:CLOCK (ARNTL:CLOCK) heterodimer binds E-box elements in the DEC2 promoter and activates transcription of DEC2.

Literature references

Kato, Y., Noshiro, M., Matsubara, K., Shen, M., Honda, K., Shingu, S. et al. (2001). Molecular cloning and characterization of DEC2, a new member of basic helix-loop-helix proteins. *Biochem Biophys Res Commun*, 280, 164-71. ↗

Editions

2009-05-27	Reviewed	D'Eustachio, P.
2010-06-18	Authored, Edited	May, B.
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