

NR1D1 (REV-ERBA) binds heme, the PPAR-GC1A gene, and recruits corepressors

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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: 77

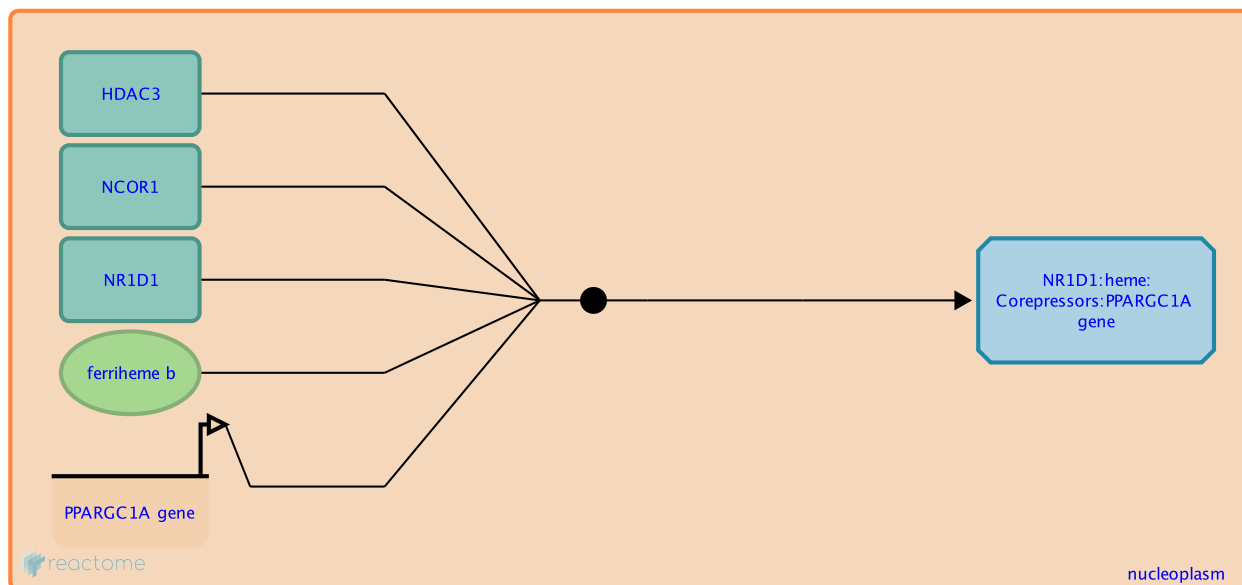
This document contains 1 reaction ([see Table of Contents](#))

NR1D1 (REV-ERBA) binds heme, the PPARGC1A gene, and recruits corepressors [↗](#)

Stable identifier: R-HSA-5663258

Type: binding

Compartments: nucleoplasm



NR1D1 (REV-ERBA) binds heme and the promoter of the PGC-1alpha (PPARGC1A) gene. The REV-ERBA:heme complex recruits the corepressors NCoR and HDAC3 and represses transcription.

Literature references

Wu, N., Yin, L., Hanniman, EA., Joshi, S., Lazar, MA. (2009). Negative feedback maintenance of heme homeostasis by its receptor, Rev-erbalpha. *Genes Dev*, 23, 2201-9. [↗](#)

Editions

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