

PKC phosphorylates NFE2L2

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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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- 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](#))

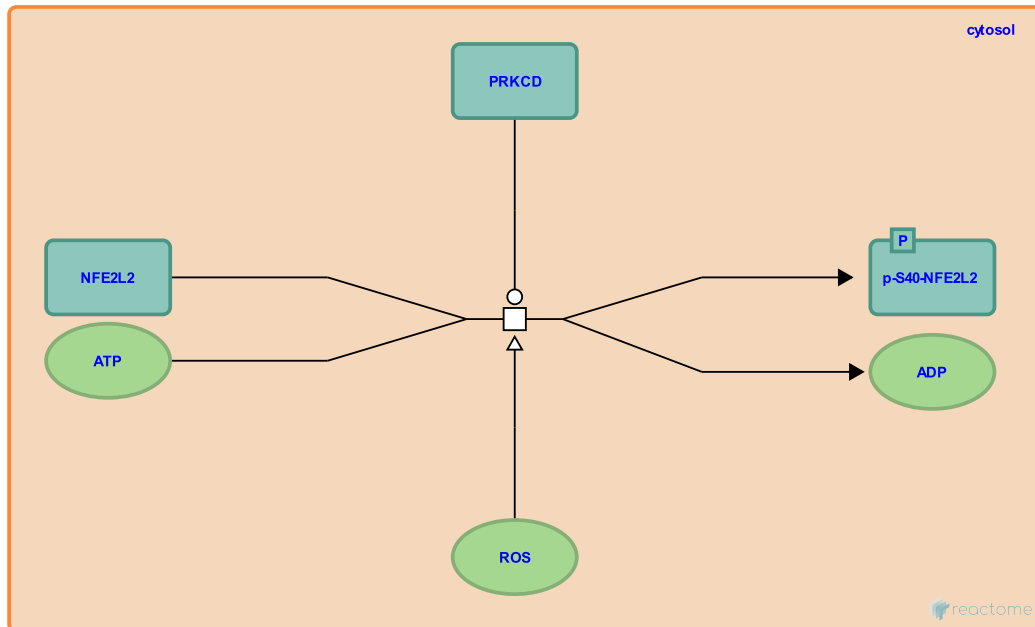
PKC phosphorylates NFE2L2 [↗](#)

Stable identifier: R-HSA-8932284

Type: transition

Compartments: cytosol

Inferred from: PKC phosphorylates Nrf2 (Rattus norvegicus)



In response to oxidative stress, protein kinase C (PKC) phosphorylates NFE2L2 (NRF2) at residue serine 40 (Ser-40). It has been demonstrated that NRF2 phosphorylation at Ser-40 facilitates its nuclear translocation (Huang et al. 2002).

Literature references

Nguyen, T., Pickett, CB., Huang, HC. (2002). Phosphorylation of Nrf2 at Ser-40 by protein kinase C regulates antioxidant response element-mediated transcription. *J. Biol. Chem.*, 277, 42769-74. [↗](#)

Editions

2016-07-22	Authored, Edited	Garapati, P V.
2021-01-23	Reviewed	Somers, J.
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