

PGD2 is reduced to 11-epi-PGF2a by AKRIC3

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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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- 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. [↗](#)
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Reactome database release: 88

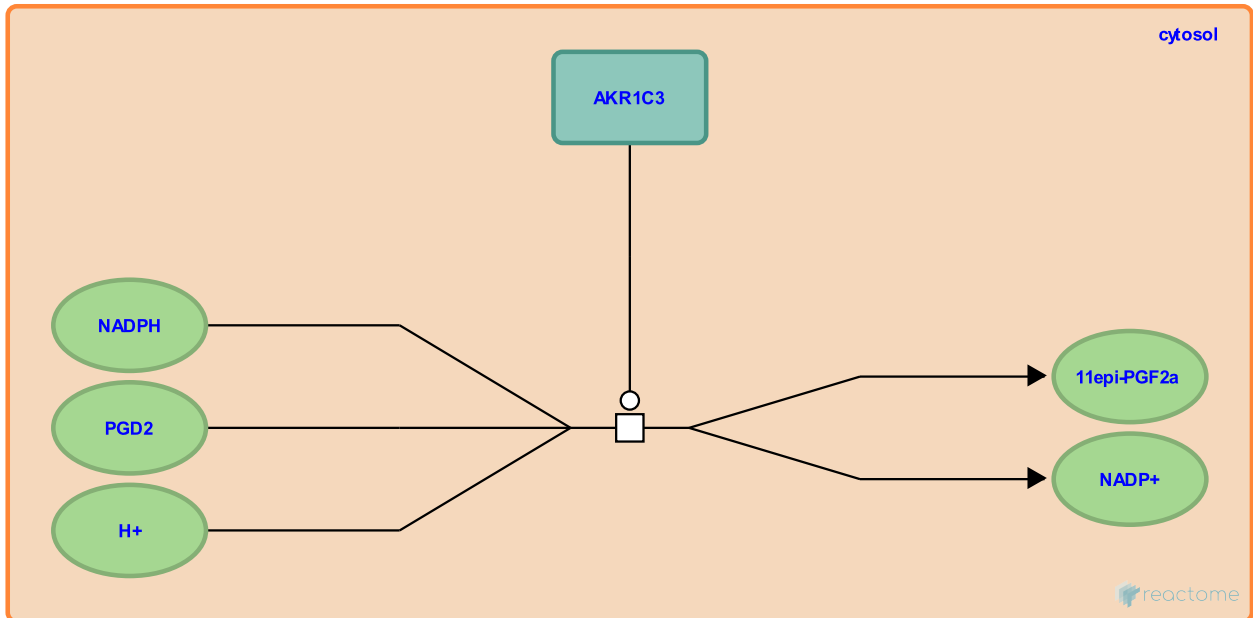
This document contains 1 reaction ([see Table of Contents](#))

PGD2 is reduced to 11-epi-PGF2a by AKR1C3 [↗](#)

Stable identifier: R-HSA-2161614

Type: transition

Compartments: cytosol



Aldo-keto reductase family 1 member C3 (AKR1C3) aka PGFS is the enzyme involved in NADPH-dependent prostaglandin D2 11-keto reductase activity of reducing prostaglandin D2 (PGD2) to 11-epi-Prostaglandin F2alpha (11-epi-PGF2a) (Liston & Roberts 1985, Koda et al. 2004).

Literature references

Niwa, H., Tsutsui, Y., Woodward, DF., Watanabe, K., Ito, S., Koda, N. (2004). Synthesis of prostaglandin F ethanolamide by prostaglandin F synthase and identification of Bimatoprost as a potent inhibitor of the enzyme: new enzyme assay method using LC/ESI/MS. *Arch Biochem Biophys*, 424, 128-36. [↗](#)

Liston, TE., Roberts LJ, 2nd. (1985). Transformation of prostaglandin D2 to 9 alpha, 11 beta-(15S)-trihydroxyprosta-(5Z,13E)-dien-1-oic acid (9 alpha, 11 beta-prostaglandin F2): a unique biologically active prostaglandin produced enzymatically in vivo in humans. *Proc Natl Acad Sci U S A*, 82, 6030-4. [↗](#)

Editions

2012-02-24	Authored, Edited	Williams, MG.
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