DDO oxidizes D-Asp to OA

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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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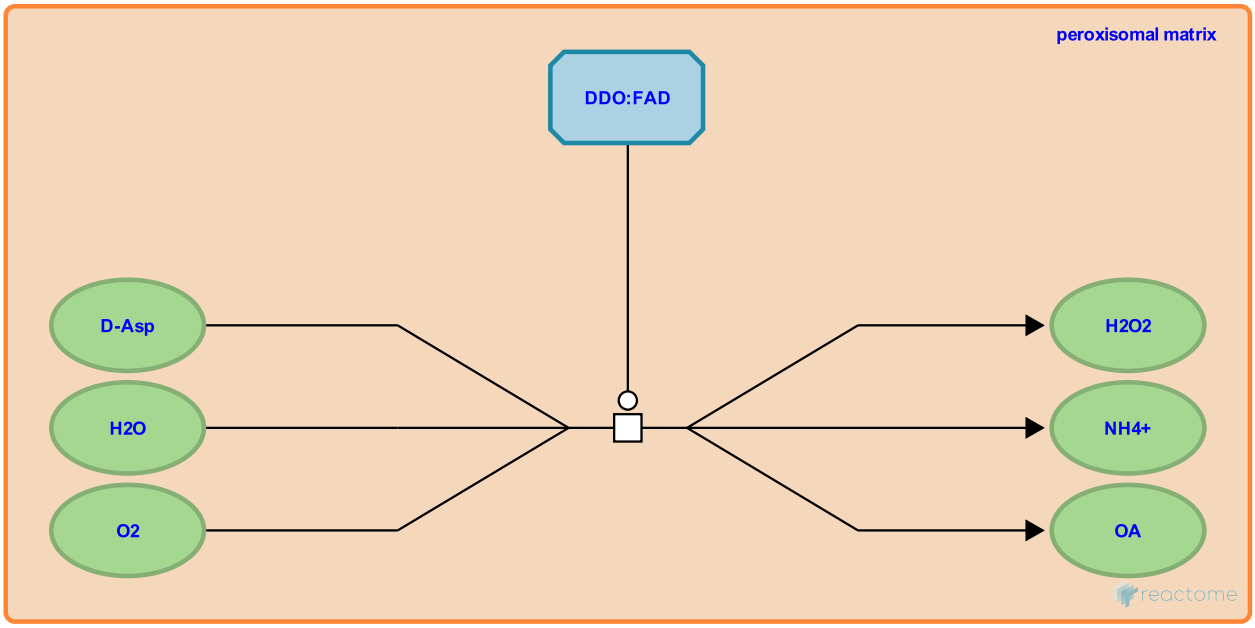
Stable identifier: R-HSA-6810076

Type: transition

Compartments: peroxisomal matrix



Peroxisomal DDO (D-aspartate oxidase) catalyzes the oxidation of D-Asp (D-aspartate) to OA (oxaloacetate) with the formation of H2O2. The human enzyme is a monomer with an FAD cofactor (Katane et al. 2010, 2015; Setoyama & Miura 1997), as is its well-characterized bovine homolog (Negri et al. 1992). Its peroxisomal location is inferred from studies in cultured cells of fusion proteins containing the carboxy-terminal peptide sequence of DDO (Amery et al. 1998).

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Editions

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