

# ALDOB tetramer cleaves Fru-1-P to GA and DHAP

Cameselle, J.C., D'Eustachio, P., Hill, D.P., Jassal, B., Ribeiro, J.M.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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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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Reactome database release: 88

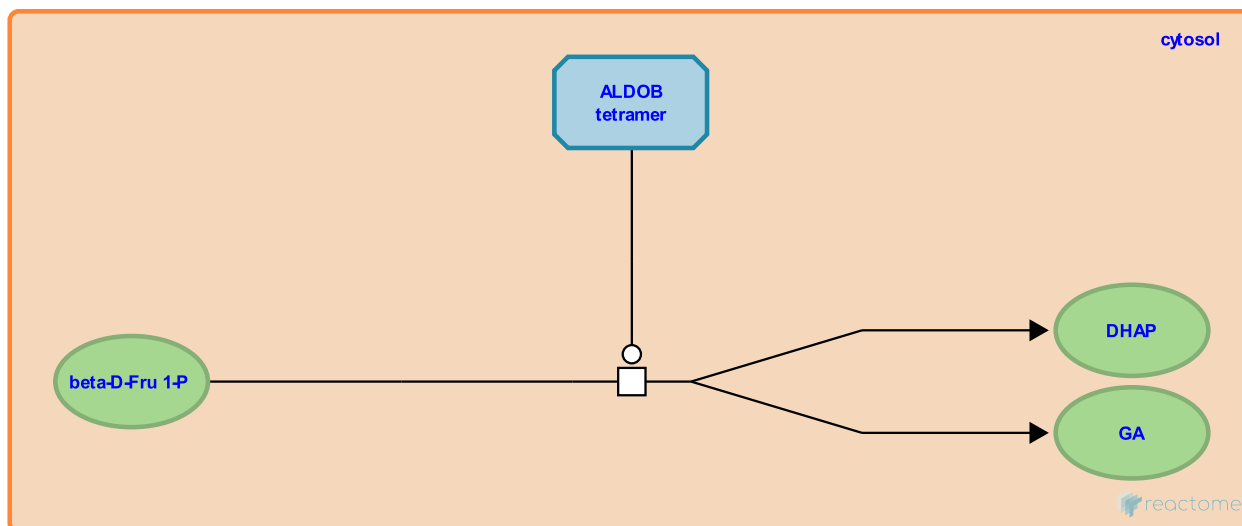
This document contains 1 reaction ([see Table of Contents](#))

## ALDOB tetramer cleaves Fru-1-P to GA and DHAP [↗](#)

**Stable identifier:** R-HSA-70342

**Type:** transition

**Compartments:** cytosol



Cytosolic aldolase B (ALDOB) catalyzes the reaction of D-fructose 1-phosphate (Fru 1-P) to form dihydroxyacetone phosphate (DHAP) and D-glyceraldehyde (GA) (Hers & Kusaka 1953; Schapira 1975). The active form of the enzyme is a tetramer (Dalby et al. 2001). Deficiencies in the enzyme are associated with hereditary fructose intolerance in vivo (e.g., Tolan 1995; Ali et al. 1998).

ALDOB is the same aldolase isoform that catalyzes the reversible cleavage of fructose-1,6-bisphosphate in glycolysis. This isoform, found in liver, kidney, and intestine, is approximately equally active with fructose 1 phosphate and fructose 1,6 bisphosphate as substrates at saturating concentrations, while the muscle and brain isoforms (ALDOA and ALDOC, respectively), have little activity with fructose-1-phosphate (Leberhz & Rutter 1969; Penhoet et al. 1969).

### Literature references

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### Editions

2010-01-25	Revised	D'Eustachio, P.
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