

# FBP tetramers hydrolyze F1,6PP to Fru(6)P

D'Eustachio, P., Harris, RA., Hill, DP.

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

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: 88

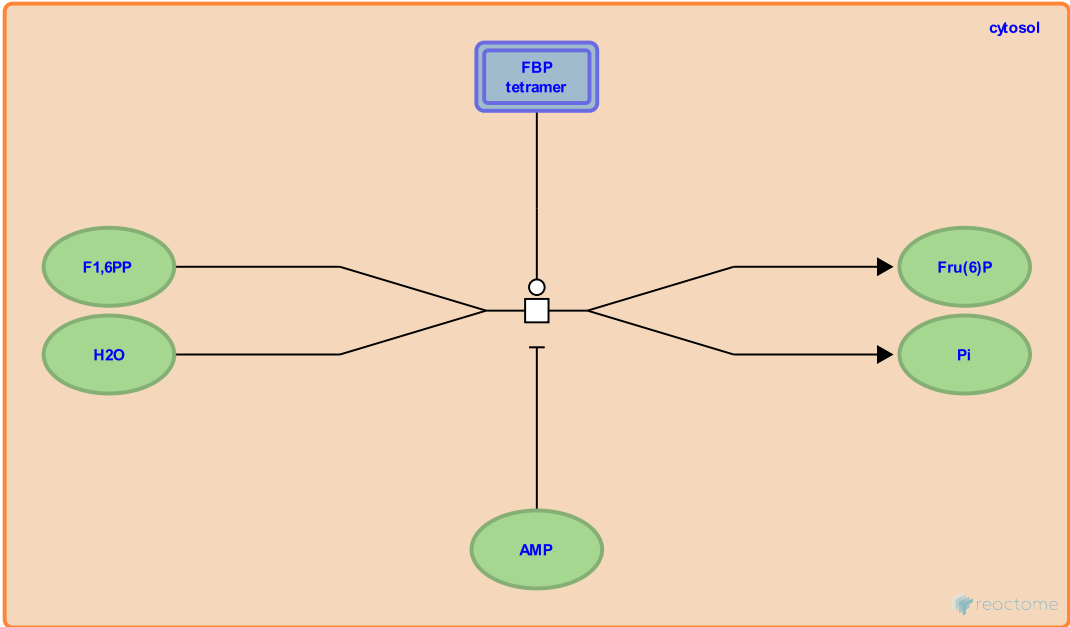
This document contains 1 reaction ([see Table of Contents](#))

**FBP tetramers hydrolyze F1,6PP to Fru(6)P** ↗

**Stable identifier:** R-HSA-70479

**Type:** transition

**Compartments:** cytosol



Cytosolic FBP (fructose-1,6-bisphosphatase) tetramers catalyze the physiologically irreversible hydrolysis of F1,6PP (fructose-1,6-bisphosphate) to form Fru(6)P (fructose-6-phosphate) and Pi (orthophosphate). In the body, two isoforms of the enzyme are expressed, one ubiquitous and one muscle-specific (Kikawa et al. 1997; Tillmann and Eschrich 1998).

**Literature references**

Nakai, A., Taketo, A., Sudo, M., Yamamoto, Y., Jin, BY., Fujisawa, K. et al. (1997). Identification of genetic mutations in Japanese patients with fructose-1,6-bisphosphatase deficiency. *Am J Hum Genet*, 61, 852-861. ↗

Tillmann, H., Eschrich, K. (1998). Isolation and characterization of an allelic cDNA for human muscle fructose-1,6-bisphosphatase. *Gene*, 212, 295-304. ↗

**Editions**

2008-09-10	Reviewed	Harris, RA.
2022-08-29	Revised	D'Eustachio, P.
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