

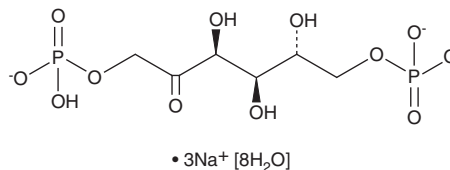
PRODUCT INFORMATION



D-Fructose-1,6-bisphosphate (sodium salt hydrate)

Item No. 20516

CAS Registry No.: 81028-91-3
Formal Name: 1,6-bis(dihydrogen phosphate)-D-fructose, trisodium salt, octahydrate
Synonym: D-Fructose-1,6-diphosphate
MF: C₆H₁₁O₁₂P₂ • 3Na [8H₂O]
FW: 550.2
Purity: ≥95%
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

D-Fructose-1,6-bisphosphate (sodium salt hydrate) is supplied as a crystalline solid. Aqueous solutions of D-fructose-1,6-bisphosphate (sodium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of D-fructose-1,6-bisphosphate (sodium salt hydrate) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

D-Fructose-1,6-bisphosphate is an intermediate in carbohydrate metabolism, including glycolysis and gluconeogenesis. During glycolysis, it is generated by the phosphorylation of fructose-6-phosphate by phosphofruktokinase. The reverse reaction, mediated by fructose-1,6-bisphosphatase-1, is one of the rate-limiting steps in gluconeogenesis.^{1,2} The same reaction occurs within chloroplasts in plants as part of the reductive pentose phosphate cycle.³ Because cancer cells adopt glycolysis as a major source of metabolic energy production, this pathway has become a major target for cancer chemotherapy.⁴

References

1. Marcus, F. and Hosey, M.M. Purification and properties of liver fructose 1,6-bisphosphatase from C57BL/KsJ normal and diabetic mice. *J. Biol. Chem.* **255(6)**, 2481-2486 (1980).
2. Van Den Berghe, G. Disorders of gluconeogenesis. *J. Inher. Metab. Dis.* **19**, 470-477 (1996).
3. Wolosiuk, R.A., Ballicora, M.A., and Hagelin, K. The reductive pentose phosphate cycle for photosynthetic CO₂ assimilation: Enzyme modulation. *FASEB J.* **7**, 622-637 (1993).
4. Seo, M., Kim, J.-D., Neau, D., et al. Structure-based development of small molecule PFKFB3 inhibitors: A framework for potential cancer therapeutic agents targeting the Warburg effect. *PLoS One* **6(9)**, e24179 (2011).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM