

PRODUCT INFORMATION



2-deoxy-D-Glucose-6-phosphate (sodium salt)

Item No. 17149

Formal Name: 6-(dihydrogen phosphate) 2-deoxy-D-arabino-hexose, monosodium salt

Synonyms: 2-Deoxyglucose-6-phosphate, 2-DG6P

MF: $C_6H_{12}O_8P \cdot Na$

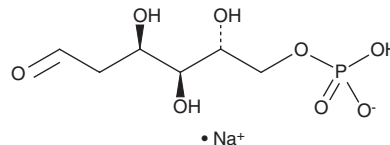
FW: 266.1

Purity: $\geq 98\%$

Supplied as: A crystalline solid

Storage: $-20^\circ C$

Stability: ≥ 4 years



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

Laboratory Procedures

2-deoxy-D-Glucose-6-phosphate (sodium salt) is supplied as a crystalline solid. Aqueous solutions of 2-deoxy-D-glucose-6-phosphate (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 2-deoxy-D-glucose-6-phosphate (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2-deoxy-D-Glucose (2-DG, Item No. 14325) is a synthetic analog of glucose used in cell metabolism and cancer research.¹ 2-DG6P is a derivative of 2-DG. It is produced in mammalian cells by the action of hexokinase on 2-DG. The accumulation of 2-DG6P in cells can inhibit glycolysis, leading to cell death.² However, the uptake of 2-DG by cells can be monitored in assays by the accumulation of 2-DG6P, which can be oxidized *in vitro* by glucose 6-phosphate dehydrogenase and reduce $NADP^+$. In bacteria and yeast, 2-DG6P is metabolized to 2-DG by 2-DG6P phosphatase.

References

1. Kang, H.T. and Hwang, E.S. 2-Deoxyglucose: An anticancer and antiviral therapeutic, but not any more a low glucose mimetic. *Life Sci.* **78(12)**, 1392-1399 (2006).
2. Urakami, K., Zangiacomì, V., Yamaguchi, K., *et al.* Impact of 2-deoxy-D-glucose on the target metabolite profile of a human endometrial cancer cell line. *Biomed. Res.* **34(5)**, 221-229 (2013).

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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