

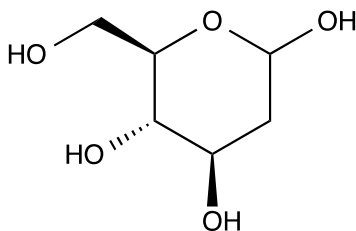


Catalog # 10-2171
2-Deoxy-D-Glucose

CAS# 154-17-6

2-DG

Lot # X106329



2-Deoxy-D-glucose (2-DG) is a synthetic glucose analog with extensive biological effects. It is commonly thought of as an inhibitor of glycolysis, but its metabolic effects are wide-ranging. 2-DG competitively inhibits glucose uptake via its metabolite 2-Deoxy-D-glucose-6-phosphate, which inhibits hexokinase and phosphoglucose-isomerase leading to decreased ATP production, cell cycle blockage, decreased cell growth and ultimately cell death.^{1,2}

- 1) Ralser *et al.*, (2008), *A catabolic blockade does not sufficiently explain how 2-deoxy-D-glucose inhibits cell growth*; Proc.Natl.Acad.Sci. USA **105** 17807
- 2) Giammarioli *et al.* (2012), *Differential effects of the glycolysis inhibitor 2-deoxy-D-glucose on the activity of pro-apoptotic agents in metastatic melanoma cells*; Int.J.Cancer **131** e337

PHYSICAL DATA

Molecular Weight:	164.16
Molecular Formula:	C ₆ H ₁₂ O ₅
Purity:	>98%
	NMR: (Conforms)
Solubility:	Soluble in Water (>15 mg mg/mL) or DMSO (>15 mg/ml).
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Store solutions in DMSO at -20°C for up to 1 month. Make solutions in water fresh daily.

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