

## 2-Deoxy-D-galactose

## Chemical Properties

CAS No. : 1949-89-9

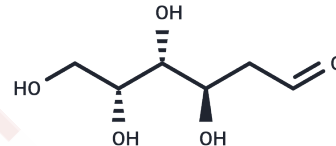
Formula: C<sub>6</sub>H<sub>12</sub>O<sub>5</sub>

Molecular Weight: 164.16

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	2-Deoxy-D-galactose is a glucose analog and glucose antagonist that inhibits the maintenance of hippocampal LTP and can suppress tumor growth by inhibiting the glycolytic process.
Targets(IC50)	Others,Endogenous Metabolite
In vitro	2-Deoxy-D-galactose is rapidly phosphorylated within 30 minutes. After incubation with 2-Deoxy-D-galactose (1 mM/L) for 5 hours, the content of 2-deoxy-D-galactose 1-phosphate reached 35 millimoles per kilogram of cells[4].
In vivo	In the passive avoidance response (PAR) acquisition trial in adult male Wistar rats, 2-deoxy-D-galactose (2, 4, and 8 μM; intracerebroventricular injection; 2-8 μM; once) exhibited PAR disruption at a dose of 4 μM[3].

## Solubility Information

Solubility	H <sub>2</sub> O: 250 mg/mL (1522.9 mM),Sonication is recommended. Methanol: 100 mg/mL (609.16 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	6.0916 mL	30.4581 mL	60.9162 mL
5 mM	1.2183 mL	6.0916 mL	12.1832 mL
10 mM	0.6092 mL	3.0458 mL	6.0916 mL
50 mM	0.1218 mL	0.6092 mL	1.2183 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Keppler DO, et al. The trapping of uridine phosphates by D-galactosamine, D-glucosamine, and 2-deoxy-D-galactose. A study on the mechanism of galactosamine hepatitis. *Eur J Biochem.* 1970 Dec;17(2):246-53.

Krug M, et al. The amnesic substance 2-deoxy-D-galactose suppresses the maintenance of hippocampal LTP. *Brain Res.* 1991 Feb 1;540(1-2):237-42.

Lorenzini CG, et al. 2-Deoxy-D-galactose effects on passive avoidance memorization in the rat. *Neurobiol Learn Mem.* 1997 Nov;68(3):317-24.

Smith DF, Keppler DO. 2-Deoxy-D-galactose metabolism in ascites hepatoma cells results in phosphate trapping and glycolysis inhibition. *Eur J Biochem.* 1977 Feb 15;73(1):83-92.

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