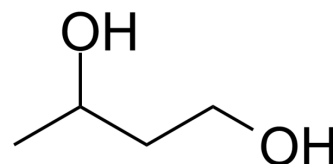


1,3-Butanediol

Cat. No.:	HY-77490A		
CAS No.:	107-88-0		
Molecular Formula:	C ₄ H ₁₀ O ₂		
Molecular Weight:	90.12		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Pure form	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 500 mg/mL (5548.16 mM)
 DMSO : 100 mg/mL (1109.63 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	11.0963 mL	55.4816 mL	110.9632 mL
	5 mM	2.2193 mL	11.0963 mL	22.1926 mL
	10 mM	1.1096 mL	5.5482 mL	11.0963 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (27.74 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (27.74 mM); Suspended solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 1.72 mg/mL (19.09 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

1,3-Butanediol, an ethanol dimer providing a source of calories for human nutrition. 1,3-Butanediol is converted in the body to β-hydroxybutyrate and has cerebral protective and hypoglycaemic effect^{[1][2]}.

REFERENCES

[1]. C Marie, et al. Protective action of 1,3-butanediol in cerebral ischemia. A neurologic, histologic, and metabolic study. J Cereb Blood Flow Metab. 1987 Dec;7(6):794-800.

[2]. R B Tobin, et al. Nutritional and metabolic studies in humans with 1,3-butanediol. Fed Proc. 1975 Nov;34(12):2171-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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