

## D-Panthenol

## Chemical Properties

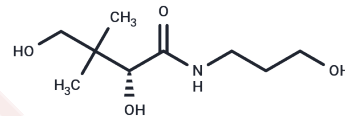
CAS No. : 81-13-0

Formula: C<sub>9</sub>H<sub>19</sub>NO<sub>4</sub>

Molecular Weight: 205.25

Appearance: no data available

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



## Biological Description

Description	D-Panthenol (D-Pantothenyl alcohol) is an alcoholic analogue of D-pantothenic acid and cholinergic agent. D-Panthenol acts as a precursor of coenzyme A necessary for acetylation reactions and is involved in the synthesis of acetylcholine. Although the exact mechanism of the actions of D-Panthenol is unclear, it may enhance the effect of acetylcholine. D-Panthenol acts on the gastrointestinal tract and increases lower intestinal motility. It is also applied topically to the skin to relieve itching and to promote healing.
Targets(IC50)	Endogenous Metabolite
In vivo	Dexpanthenol has positive effects on protection of cerebral tissue after ischaemia reperfusion[1]. Topical application of dexpanthenol is widely used in clinical practice for the improvement of wound healing. Upregulation of IL-6, IL-1, CYP1B1, CXCL1, CCL18 and KAP 4-2 gene expression and downregulation of psorasin mRNA and protein expression are identified in samples treated topically with dexpanthenol[2].

## Solubility Information

Solubility	DMSO: 45 mg/mL (219.24 mM), Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.8721 mL	24.3605 mL	48.7211 mL
5 mM	0.9744 mL	4.8721 mL	9.7442 mL
10 mM	0.4872 mL	2.4361 mL	4.8721 mL
50 mM	0.0974 mL	0.4872 mL	0.9744 mL

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.

Reference

Zakaria MM, et al. J Pak Med Assoc. 2011, 61(9):889-92.

Heise R, et al. Skin Pharmacol Physiol. 2012, 25(5):241-8.

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