

PRODUCT INFORMATION



D-Pantethine

Item No. 39137

CAS Registry No.: 16816-67-4
Formal Name: (2R,2'R)-N,N'-[dithiobis[2,1-ethanediyylimino(3-oxo-3,1-propanediy)]][bis[2,4-dihydroxy-3,3-dimethyl-butanamide]

MF: C₂₂H₄₂N₄O₈S₂

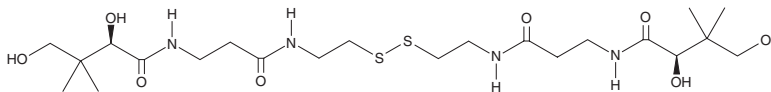
FW: 554.7

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

D-Pantethine is supplied as a solid. A stock solution may be made by dissolving the D-pantethine in the solvent of choice, which should be purged with an inert gas. D-Pantethine is slightly soluble in acetonitrile.

D-Pantethine is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

D-Pantethine is a disulfide-linked derivative of the coenzyme A biosynthetic precursor D-pantothenic acid (Item No. 17288).¹ It reduces cell death, the percent of infected cells, nucleocapsid protein (N protein) levels, and spike glycoprotein (S protein), also known as surface glycoprotein, levels in Vero E6 cells infected by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) when used at concentrations of 100 or 250 μM. It decreases the cholesterol-to-protein ratio in uninfected Vero E6 cells, but not SARS-CoV-2-infected Vero E6 cells, when used at a concentration of 250 μM. Dietary administration of D-pantethine (18.2 mg/kg in the diet) increases body weight gain in rats fed a D-pantothenic acid-deficient diet.²

References

1. Abou-Hamdan, M., Saleh, R., Mani, S., *et al.* Potential antiviral effects of pantethine against SARS-CoV-2. *Sci. Rep.* **13**(1), 2237 (2023).
2. Shibata, K., Kaneko, M., and Fukuwatari, T. D-pantethine has vitamin activity equivalent to D-pantothenic acids for recovering from a deficiency of D-pantothenic acid in rats. *J. Nutr. Sci. Vitaminol. (Tokyo)* **59**(2), 93-99 (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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