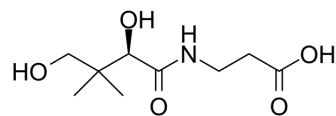


D-Pantothenic acid

Cat. No.:	HY-B0430		
CAS No.:	79-83-4		
Molecular Formula:	C ₉ H ₁₇ NO ₅		
Molecular Weight:	219.23		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	D-Pantothenic acid is an essential trace nutrient that functions as the obligate precursor of coenzyme A (CoA). D-Pantothenic acid plays key roles in myriad biological processes, including many that regulate carbohydrate, lipid, protein, and nucleic acid metabolism ^[1] .
In Vitro	D-Pantothenic acid sodium is a precursor to coenzyme A and is primarily involved in energy production and lipid metabolism through the TCA cycle and the β-oxidation pathway, respectively ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Pantothenic acid (PTA; 3x10, 3x100, and 3x300 mg/kg) decreases Valproic acid (VPA; 300, 400, and 500 mg/kg, s.c.)-induced neural tube defects in mice ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Model:	Female ICR mice weighing 29-35 g ^[2]
Dosage:	3x10, 3x100, and 3x300 mg/kg (10 mL/kg, volume administered)
Administration:	Injected intraperitoneally (i.p.) on day 8.5 of gestation
Result:	Significantly reduced VPA (300, 400, and 500 mg/kg, s.c.)-induced exencephaly, while none of the other external malformations such as open eyelid or skeletal malformations such as fused, absent, or bifurcated ribs and fused thoracic vertebrae and fused sternbrae were reduced.

CUSTOMER VALIDATION

- Environ Sci Pollut Res Int. 2018 Feb;25(4):3765-3774.
- Norwegian University of Science and Technology. Department of Clinical and Molecular Medicine. 2021 Oct.

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REFERENCES

[1]. Shuai Chen, et al. Metabolomic analysis of the toxic effect of chronic exposure of cadmium on rat urine. Environ Sci Pollut Res Int. 2018 Feb;25(4):3765-3774.

[2]. M Sato, et al. Pantothenic acid decreases valproic acid-induced neural tube defects in mice (I). Teratology. 1995 Sep;52(3):143-8.

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

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