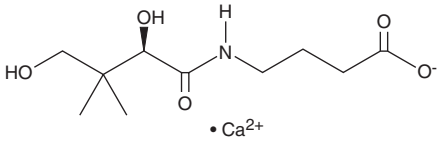
PRODUCT INFORMATION

Hopantenate (calcium salt)

Item No. 45696

CAS Registry No.: 17097-76-6
Formal Name: 4-[[(2R)-2,4-dihydroxy-3,3-dimethyl-1-oxobutyl]amino-butanoic acid, calcium salt
Synonyms: HOPA, HoPan
MF: $C_{10}H_{18}NO_5$ • 1/2Ca
FW: 504.6
Purity: ≥98%
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

Hopantenate (calcium salt) is supplied as a solid. A stock solution may be made by dissolving the hopantenate (calcium salt) in the solvent of choice, which should be purged with an inert gas.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of hopantenate (calcium salt) can be prepared by directly dissolving the solid. Hopantenate (calcium salt) is sparingly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Hopantenate is a derivative of pantothenic acid (Item No. 17288), a biosynthetic precursor of CoA.[1] Hopantenate, after phosphorylation by pantothenate kinase (PanK), forms a nonreactive complex with phosphopantothenoylcysteine synthetase (PPCS) that inhibits cellular CoA biosynthesis. Hopantenate induces acute encephalopathy with hepatic steatosis and coma in dogs when administered alone but not when combined with pantothenic acid.[2] It reduces electrically induced seizure activity and methylphenidate-induced hyperlocomotion in mice at 2 mg/kg.[3]

References

1. Mostert, K.J., Sharma, N., van der Zwaag, M., *et al.* The coenzyme A level modulator hopantenate (HoPan) inhibits phosphopantotenoylcysteine synthetase activity. *ACS Chem Biol.* **16(11)**, 2401-2414 (2021).
2. Noda, S., Haratake, J., Sasaki, A., *et al.* Acute encephalopathy with hepatic steatosis induced by pantothenic acid antagonist, calcium hopantenate, in dogs. *Liver* **11(3)**, 134-142 (1991).
3. Nishizawa, Y., Kodama, T., and Tsujino, G. Effect of gamma-aminobutyric acid derivatives, especially homopantothenic acid, on the excitability of the brain. *J. Vitaminol. (Kyoto)* **14(4)**, 331-344 (1968).

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.

WARRANTY AND LIMITATION OF REMEDY
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