

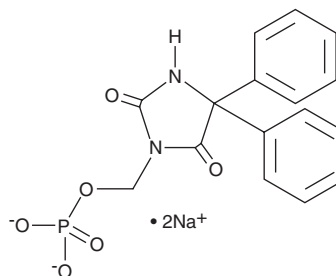
PRODUCT INFORMATION



Fosphenytoin (sodium salt)

Item No. 23889

CAS Registry No.: 92134-98-0
Formal Name: 5,5-diphenyl-3-[(phosphonoxy)methyl]-2,4-imidazolidinedione, disodium salt
Synonyms: ACC-9653, CI-982
MF: C₁₆H₁₃N₂O₆P • 2Na
FW: 406.2
Purity: ≥98%
Supplied as: A crystalline 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

Fosphenytoin (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the fosphenytoin (sodium salt) in the solvent of choice, which should be purged with an inert gas. Fosphenytoin (sodium salt) is soluble in the organic solvents ethanol and DMSO. The solubility of fosphenytoin (sodium salt) in these solvents is approximately 1 mg/ml.

Description

Fosphenytoin is a prodrug of phenytoin that is rapidly converted to phenytoin, a voltage-gated sodium channel blocker, *in vivo*.¹⁻³ It induces less tissue damage compared with two other phenytoin prodrugs in rats following subcutaneous and intramuscular administration.¹ Fosphenytoin has anticonvulsant activity in a mouse model of maximal electroshock seizures similar to that of phenytoin (ED₅₀s = 16 and 8 mg/kg, respectively).² It also has antiarrhythmic activity in isolated guinea pig atria and in anesthetized dogs. Formulations containing fosphenytoin have been used in the treatment of status epilepticus.

References

1. Varia, S.A. and Stella, V.J. Phenytoin prodrugs VI: *In vivo* evaluation of a phosphate ester prodrug of phenytoin after parenteral administration to rats. *J. Pharm. Sci.* **73(8)**, 1087-1090 (1984).
2. Smith, R.D., Brown, B.S., Maher, R.W., *et al.* Pharmacology of ACC-9653 (phenytoin prodrug). *Epilepsia* **30(Suppl. 2)**, S15-S21 (1989).
3. Boucher, B.A. Fosphenytoin: A novel phenytoin prodrug. *Pharmacotherapy* **16(5)**, 777-791 (1996).

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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