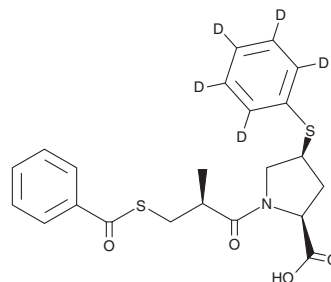


PRODUCT INFORMATION



Zofenopril-d₅ Item No. 43425

Formal Name: (4S)-1-[(2S)-3-(benzoylthio)-2-methyl-1-oxopropyl]-4-((phenyl-d₅)thio)-L-proline
MF: C₂₂H₁₈D₅NO₄S₂
FW: 434.6
Chemical Purity: ≥95% (Zofenopril)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
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

Zofenopril-d₅ is intended for use as an internal standard for the quantification of zofenopril (Item No. 29525) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Zofenopril-d₅ is supplied as a solid. A stock solution may be made by dissolving the zofenopril-d₅ in the solvent of choice, which should be purged with an inert gas. Zofenopril-d₅ is soluble in methanol and DMSO.

Description

Zofenopril is a prodrug form of the angiotensin-converting enzyme (ACE) inhibitor zofenoprilat (Item No. 38124).¹ Zofenopril is hydrolyzed by cardiac esterases *in vivo* to form zofenoprilat. It inhibits ACE with an IC₅₀ value of 0.9 nM in heart tissue homogenates and inhibits cardiac ACE activity in isolated perfused rat hearts. It reduces mean arterial blood pressure in two kidney-one clip renal hypertensive (2K-1C) rats and spontaneously hypertensive rats (SHRs) when administered at doses of 2.2, 6.6, and 22 mg/kg.² Unlike the ACE inhibitor ramipril (Item No. 15558), zofenopril does not affect bronchoalveolar lavage fluid (BALF) levels of bradykinin or prostaglandin E₂ (PGE₂; Item No. 14010) or increase coughing induced by citric acid in guinea pigs.³

References

1. Grover, G.J., Sleph, P.G., Dzwonczyk, S., *et al.* Effects of different angiotensin-converting enzyme (ACE) inhibitors on ischemic isolated rat hearts: Relationship between cardiac ACE inhibition and cardioprotection. *J. Pharmacol. Exp. Ther.* **257**(3), 919-929 (1991).
2. DeForrest, J.M., Waldron, T.L., Krapcho, J., *et al.* Preclinical pharmacology of zofenopril, an inhibitor of angiotensin I converting enzyme. *J. Cardiovasc. Pharmacol.* **13**(6), 887-894 (1989).
3. Cialdai, C., Giuliani, S., Valenti, C., *et al.* Differences between zofenopril and ramipril, two ACE inhibitors, on cough induced by citric acid in guinea pigs: Role of bradykinin and PGE₂. *Naunyn Schmiedeberg's Arch. Pharmacol.* **382**(5-6), 455-461 (2010).

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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