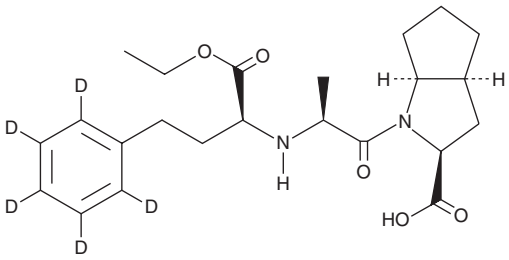
PRODUCT INFORMATION

Ramipril-d_5

Item No. 25425

CAS Registry No.: 1132661-86-9
Formal Name: (2S,3aS,6aS)-1-[(2S)-2-[[(1S)-1-(ethoxycarbonyl)-3-(phenyl-2,3,4,5,6-d_5)propyl]amino]-1-oxopropyl]octahydrocyclopenta[b]pyrrole-2-carboxylic acid
MF: $C_{23}H_{27}D_5N_2O_5$
FW: 421.5
Chemical Purity: ≥98% (Ramipril)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_5); ≤1% d_0
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

Ramipril-d_5 is intended for use as an internal standard for the quantification of ramipril (Item No. 15558) 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).

Ramipril-d_5 is supplied as a solid. A stock solution may be made by dissolving the ramipril-d_5 in the solvent of choice, which should be purged with an inert gas. Ramipril-d_5 is slightly soluble in chloroform and methanol.

Description

Ramipril is a prodrug form of the angiotensin converting enzyme (ACE) inhibitor ramiprilat (Item No. 15557).[1] Ramipril (2.5 mg/kg per day, p.o.) reduces systolic blood pressure in spontaneously hypertensive rats.[2] It reduces aortic valve backscatter and improves aortic flow in a rabbit model of aortic valve stenosis.[3] Ramipril also decreases paw swelling and serum levels of TNF-α and prostaglandin E_2 (PGE_2) as well as cardiac collagen deposition and fibrosis in a rat model of adjuvant-induced arthritis.[4]

References

1. Leung, D., Abbenante, G., and Fairlie, D.P. Protease inhibitors: Current status and future prospects. *J. Med. Chem.* **43(3)**, 305-341 (2000).
2. Cachofeiro, V., Maeso, R., Rodrigo, E., *et al.* Nitric oxide and prostaglandins in the prolonged effects of losartan and ramipril in hypertension. *Hypertension* **26(2)**, 236-243 (1995).
3. Ngo, D.T., Stafford, I., Sverdlov, A.L., *et al.* Ramipril retards development of aortic valve stenosis in a rabbit model: Mechanistic considerations. *Br. J. Pharmacol.* **162(3)**, 722-732 (2011).
4. Shi, Q., Abusarah, J., Baroudi, G., *et al.* Ramipril attenuates lipid peroxidation and cardiac fibrosis in an experimental model of rheumatoid arthritis. *Arthritis Res. Ther.* **14(5)**, R223 (2012).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM