

Product Data Sheet

Product Name: Captopril-d3

Cat. No.: GC45398

Chemical Properties

Cas. No. 1356383-38-4

SMILES OC([C@]1([2H])CCC([2H])([2H])N1C([C@H](C)CS)=O)=O

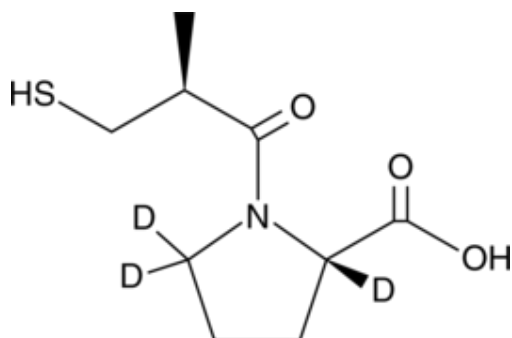
Formula C₉H₁₂D₃NO₃S M.Wt 220.3

Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, Ethanol: 30 mg/ml, PBS (pH 7.2): 3 mg/ml
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Captopril-d3 is intended for use as an internal standard for the quantification of captopril by GC- or LC-MS. Captopril is a first generation nonpeptidic ACE inhibitor (IC₅₀ = 6.3 nM) that was designed based on bradykinin-potentiating peptides isolated from the venom of *B. jararaca*, a pit viper native to Brazil. 1,2,3 It does not exhibit a domain preference for binding either the C- or N-terminal active

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

sites of the somatic form of ACE.1 Acute and chronic administration of captopril reduces blood pressure in spontaneously hypertensive Wistar-Kyoto rats and does not induce hypotension in salt-repleted normotensive Wistar-Kyoto rats.4 Captopril is also a competitive and reversible inhibitor of leukotriene (LTA₄) hydrolase, which results in the disruption of LTB₄ synthesis with an IC₅₀ value of 14 μ M.5

References

1. Dalkas, G.A., Marchand, D., Galleyrand, J.C., et al. Study of a lipophilic captopril analogue binding to angiotensin I converting enzyme. J. Pept. Sci. 16(2), 91-97 (2010).
2. Redelinghuys, P., Nchinda, A.T., and Sturrock, E.D. Development of domain-selective angiotensin I-converting enzyme inhibitors. Ann. N.Y. Acad. Sci 1056, 160-175 (2005).
3. Cushman, D.W., and Ondetti, M.A. Design of angiotensin converting enzyme inhibitors. Nat. Med. 5(10), 1110-1113 (1999).
4. Rubin, B., Antonaccio, M.J., and Horovitz, Z.P. Captopril (SQ 14,225) (D-3-mercapto-2-methylpropanoyl-L-proline): A novel orally active inhibitor of angiotensin-converting enzyme and antihypertensive agent. Prog. Cardiovasc. Dis. 21(3), 183-194 (1978).
5. Orning, L., Krivi, G., Bild, G., et al. Inhibition of leukotriene A₄ hydrolase/aminopeptidase by captopril. J. Biol. Chem. 266(25), 16507-16511 (1991).

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA