

Product Data Sheet

Product Name: Hydrochlorothiazide-13C6

Cat. No.: GC74190

Chemical Properties

Cas. No. 1261396-79-5

Formula $C_{13}C_6H_8ClN_3O_4S_2$

M.Wt 303.7

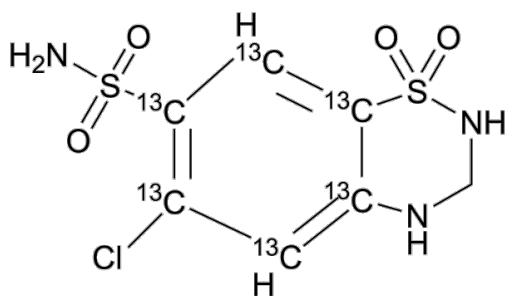
Solubility

Storage -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

Hydrochlorothiazide-13C6 is the 13C labeled drochlorothiazide[1]. drochlorothiazide (HCTZ), an orally active diuretic agent of the thiazide class, inhibits transforming TGF-β/Smad signaling pathway. drochlorothiazide has direct vascular relaxant effects via opening of the calcium-activated potassium (KCA) channel. drochlorothiazide improves cardiac function, reduces fibrosis and has antipertensive effect[2][3][4].

Stable heavy isotopes of drogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has

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gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

References:

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.
- [2]. Duarte, J.D. and R.M. Cooper-DeHoff, Mechanisms for blood pressure lowering and metabolic effects of thiazide and thiazide-like diuretics. Expert Rev Cardiovasc Ther, 2010. 8(6): p. 793-802.
- [3]. Magdy M Abdelquader, et al. Inhibition of Co-Crystallization of Olmesartan Medoxomil and drochlorothiazide for Enhanced Dissolution Rate in Their Fixed Dose Combination. AAPS PharmSciTech. 2018 Dec 1720(1):3.
- [4]. Jinghong Luo, et al. drochlorothiazide modulates ischemic heart failure-induced cardiac remodeling via inhibiting angiotensin II type 1 receptor pathway in rats. Cardiovasc Ther. 2017 Apr35(2).

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