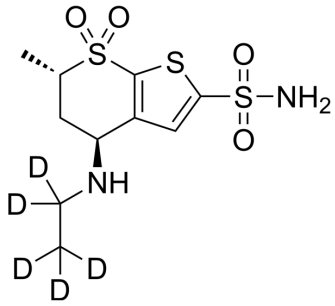
Dorzolamide-d_5

Cat. No.:	HY-B0109S
CAS No.:	1227097-70-2
Molecular Formula:	$C_{10}H_{11}D_5N_2O_4S_3$
Molecular Weight:	329.47
Target:	Carbonic Anhydrase; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Dorzolamide-d_5 is the deuterium labeled Dorzolamide. Dorzolamide (L671152) is a potent carbonic anhydrase II inhibitor, with IC50 values of 0.18 nM and 600 nM for red blood cell CA-II and CA-I respectively. Dorzolamide possesses anti-tumor activity[1][2].
IC_{50} & Target	CA
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. J Biollaz, et al. Whole-blood pharmacokinetics and metabolic effects of the topical carbonic anhydrase inhibitor dorzolamide. Eur J Clin Pharmacol. 1995;47(5):455-60.

[3]. Sangly P Srinivas, et al. Inhibition of carbonic anhydrase activity in cultured bovine corneal endothelial cells by dorzolamide. Invest Ophthalmol Vis Sci. 2002 Oct;43(10):3273-8.

[4]. Belal M Ali, et al. Dorzolamide synergizes the antitumor activity of mitomycin C against Ehrlich's carcinoma grown in mice: role of thioredoxin-interacting protein. Naunyn Schmiedebergs Arch Pharmacol. 2015 Dec;388(12):1271-82.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA