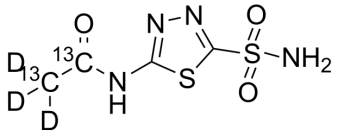
Acetazolamide-$^{13}C_2$,d_3

Cat. No.:	HY-B0782S1
Molecular Formula:	$C_2{}^{13}C_2H_3D_3N_4O_3S_2$
Molecular Weight:	227.25
Target:	Carbonic Anhydrase; Autophagy; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Autophagy; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Acetazolamide-$^{13}C_2$,d_3 is the ^{13}C- and deuterium labeled Acetazolamide. Acetazolamide is a carbonic anhydrase (CA) IX inhibitor with an IC50 of 30 nM for hCA IX[1]. Diuretic effects[4].
IC_{50} & Target	CA Ⅸ
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[37]. 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):211-223.

[2]. Bayat Mokhtari R, et al. Acetazolamide potentiates the anti-tumor potential of HDACi, MS-275, in neuroblastoma. BMC Cancer. 2017 Feb 24;17(1):156.

[3]. Gao H, et al. Combined treatment with acetazolamide and cisplatin enhances chemosensitivity in laryngeal carcinoma Hep-2 cells. Oncol Lett. 2018 Jun;15(6):9299-9306.

[4]. Hou Z, et al. Dual-tail approach to discovery of novel carbonic anhydrase IX inhibitors by simultaneously matching the hydrophobic and hydrophilic halves of the active site. Eur J Med Chem. 2017 May 26;132:1-10.

[5]. Kassamali R, et al. Acetazolamide: a forgotten diuretic agent. Cardiol Rev. 2011 Nov-Dec;19(6):276-8.

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