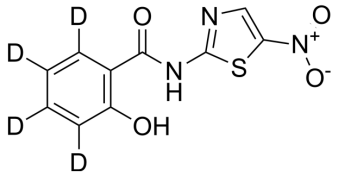
Tizoxanide-d_4

Cat. No.:	HY-12687S
CAS No.:	1246817-56-0
Molecular Formula:	$C_{10}H_3D_4N_3O_4S$
Molecular Weight:	269.27
Target:	Bacterial; Autophagy; HIV; Isotope-Labeled Compounds
Pathway:	Anti-infection; Autophagy; Others
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



BIOLOGICAL ACTIVITY

Description	Tizoxanide-d_4 is the deuterium labeled Tizoxanide. Tizoxanide is the active metabolite of Nitazoxanide, which is a thiazolide anti-infective compound against anaerobic bacteria, protozoa, and a range of viruses. Tizoxanide has anti-HIV-1 activities[1][2].
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]. Korba BE, et al. Nitazoxanide, tizoxanide and other thiazolides are potent inhibitors of hepatitis B virus and hepatitis C virus replication. Antiviral Res. 2008 Jan;77(1):56-63.

[3]. Ashton LV, et al. In Vitro Susceptibility of Canine Influenza A (H3N8) Virus to Nitazoxanide and Tizoxanide. Vet Med Int. 2010 Aug 12;2010. pii: 891010.

[4]. Korba BE, et al. Potential for hepatitis C virus resistance to nitazoxanide or tizoxanide. Antimicrob Agents Chemother. 2008 Nov;52(11):4069-71.

[5]. Trabattoni D, et al. Thiazolides Elicit Anti-Viral Innate Immunity and Reduce HIV Replication. Sci Rep. 2016 Jun 2;6:27148.

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