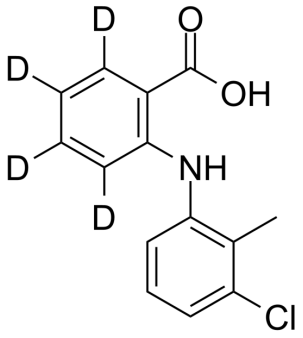
Tolfenamic Acid-D4

Cat. No.:	HY-B0335S
CAS No.:	1246820-82-5
Molecular Formula:	$C_{14}H_8D_4ClNO_2$
Molecular Weight:	265.73
Target:	COX
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Tolfenamic Acid-D4 (GEA 6414-D4) is the deuterium labeled Tolfenamic Acid. Tolfenamic Acid (GEA 6414) is a non-steroidal anti-inflammatory and anti-cancer agent, selectively inhibits COX-2, with an IC_{50} of 13.49 μM (3.53 μg/mL) in LPS-treated (COX-2) canine DH82 monocyte/macrophage cells, but shows no effect on COX-1[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]. Kay-Mugford P, et al. In vitro effects of nonsteroidal anti-inflammatory drugs on cyclooxygenase activity in dogs. Am J Vet Res. 2000 Jul;61(7):802-10.

[3]. Maliakal P, et al. Chemopreventive effects of tolfenamic acid against esophageal tumorigenesis in rats. Invest New Drugs. 2012 Jun;30(3):853-61.

[4]. Sankpal UT, et al. Tolfenamic acid-induced alterations in genes and pathways in pancreatic cancer cells. Oncotarget. 2017 Feb 28;8(9):14593-14603

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