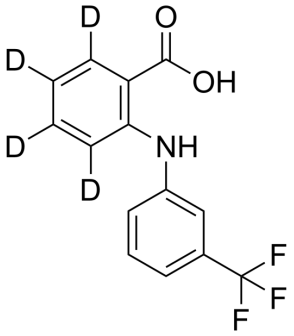
Flufenamic acid-d_4

Cat. No.:	HY-B1221S
CAS No.:	1185071-99-1
Molecular Formula:	$C_{14}H_6D_4F_3NO_2$
Molecular Weight:	285.25
Target:	Chloride Channel; Calcium Channel; COX; AMPK; Potassium Channel; Parasite; Isotope-Labeled Compounds
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Immunology/Inflammation; Epigenetics; PI3K/Akt/mTOR; Anti-infection; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Flufenamic acid-d_4 is deuterium labeled Flufenamic acid. Flufenamic acid is a non-steroidal anti-inflammatory agent, inhibits cyclooxygenase (COX), activates AMPK, and also modulates ion channels, blocking chloride channels and L-type Ca $^{2+}$ channels, modulating non-selective cation channels (NSC), activating K+ channels. Flufenamic acid binds to the central pocket of TEAD2 YBD and inhibits both TEAD function and TEAD-YAP-dependent processes, such as cell migration and proliferation.
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]. Guinamard R, et al. Flufenamic acid as an ion channel modulator. Pharmacol Ther. 2013 May;138(2):272-84.

[3]. Pobbati AV, et al. Targeting the Central Pocket in Human Transcription Factor TEAD as a Potential Cancer Therapeutic Strategy. Structure. 2015;23(11):2076-2086.

[4]. Pongkorpsakol P, et al. Cellular mechanisms underlying the inhibitory effect of flufenamic acid on chloride secretion in human intestinal epithelial cells. J Pharmacol Sci. 2017 Jun;134(2):93-100.

[5]. Pongkorpsakol P, et al. Flufenamic acid protects against intestinal fluid secretion and barrier leakage in a mouse model of Vibrio cholerae infection through NF-κB inhibition and AMPK activation. Eur J Pharmacol. 2017 Mar 5;798:94-104.

Caution: Product has not been fully validated for medical applications. For research use only.

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