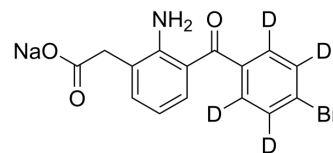


Bromfenac-d₄ sodium

Cat. No.:	HY-B1888AS
CAS No.:	2749400-35-7
Molecular Formula:	C ₁₅ H ₇ D ₄ BrNNaO ₃
Molecular Weight:	360.17
Target:	COX; Isotope-Labeled Compounds
Pathway:	Immunology/Inflammation; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Bromfenac-d ₄ (sodium) is deuterium labeled Bromfenac (sodium). Bromfenac sodium is a potent and orally active inhibitor of COX, with IC ₅₀ s of 5.56 and 7.45 nM for COX-1 and COX-2, respectively. Bromfenac sodium is a brominated non-steroidal anti-inflammatory/analgesic agent (NSAID), and it is commonly used for the research of postoperative inflammation and pain following cataract surgery, and pseudophakic cystoid macular edema (CME)[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]. Chen K, et, al. Bromfenac Inhibits TGF-β1-Induced Fibrotic Effects in Human Pterygium and Conjunctival Fibroblasts. *Invest Ophthalmol Vis Sci.* 2019 Mar 1; 60(4): 1156-1164.
- [3]. Nolan JC, et, al. The topical anti-inflammatory and analgesic properties of bromfenac in rodents. *Agents Actions.* 1988 Aug; 25(1-2): 77-85.
- [4]. Schechter BA, et, al. Use of topical bromfenac for treating ocular pain and inflammation beyond cataract surgery: a review of published studies. *Clin Ophthalmol.* 2019 Aug 1; 13:1439-1460.

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

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