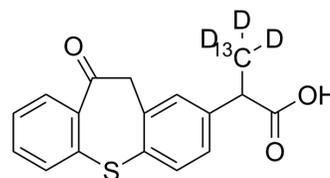


Zaltopfen-¹³C,₃D₃

Cat. No.:	HY-B0619S1
Molecular Formula:	C ₁₆ ¹³ CH ₁₁ D ₃ O ₃ S
Molecular Weight:	302.37
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	Zaltopfen- ¹³ C, ₃ D ₃ is the ¹³ C- and deuterium labeled Zaltopfen. Zaltopfen (CN100), a non-steroidal anti-inflammatory drug (NSAID), is a preferential and orally active COX-2 inhibitor, with IC50s of 1.3 and 0.34 μM for COX-1 and COX-2, respectively. Zaltopfen exhibits powerful anti-inflammatory effects as well as an analgesic action on inflammatory pain[1][2][3].
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 ^[47] . 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]. Hirate K, et, al. Zaltopfen, a non-steroidal anti-inflammatory drug, inhibits bradykinin-induced pain responses without blocking bradykinin receptors. *Neurosci Res.* 2006 Apr;54(4):288-94.
- [3]. Kameyama T, et, al. Analgesic and antiinflammatory effects of 2-(10,11-dihydro-10-oxo-dibenzo[b,f]thiepin-2-yl)propionic acid in rat and mouse. *Arzneimittelforschung.* 1987 Jan;37(1):19-26.
- [4]. Kawai S, et, al. Comparison of cyclooxygenase-1 and -2 inhibitory activities of various nonsteroidal anti-inflammatory drugs using human platelets and synovial cells. *Eur J Pharmacol.* 1998 Apr 17;347(1):87-94.

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

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