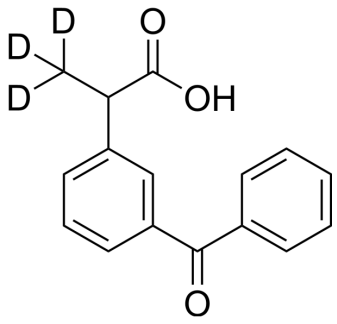
Ketoprofen-d_3

Cat. No.:	HY-B0227S
CAS No.:	159490-55-8
Molecular Formula:	$C_{16}H_{11}D_3O_3$
Molecular Weight:	257.3
Target:	Apoptosis; COX
Pathway:	Apoptosis; Immunology/Inflammation
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)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (388.65 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.8865 mL	19.4326 mL	38.8651 mL
	5 mM	0.7773 mL	3.8865 mL	7.7730 mL
	10 mM	0.3887 mL	1.9433 mL	3.8865 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ketoprofen-d_3 is the deuterium labeled Ketoprofen. Ketoprofen (RP-19583) is a non-steroidal antiinflammatory agent, acting as a potent inhibitor of COX, with IC50s of 2 nM and 26 nM for COX-1 and COX-2 in human blood monocytes, respectively[1].

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]. Palomer A, et al. Structure-based design of cyclooxygenase-2 selectivity into ketoprofen. Bioorg Med Chem Lett. 2002 Feb 25;12(4):533-7.

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