Ketoprofen-d_4

Cat. No.: HY-B0227S1

CAS No.: 1219805-29-4

Molecular Formula: $C_{16}H_{10}D_4O_3$

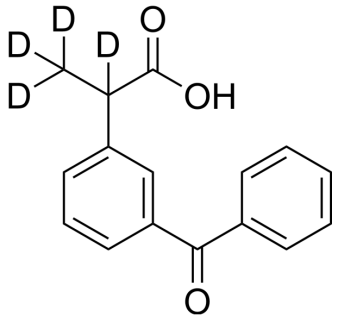
Molecular Weight: 258.31

Target: Apoptosis; COX

Pathway: Apoptosis; Immunology/Inflammation

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (387.13 mM)

H2O : 0.1 mg/mL (0.39 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Concentration \ Solvent, Mass	1 mg	5 mg	10 mg
1 mM	3.8713 mL	19.3566 mL	38.7132 mL
5 mM	0.7743 mL	3.8713 mL	7.7426 mL
10 mM	0.3871 mL	1.9357 mL	3.8713 mL

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

BIOLOGICAL ACTIVITY

Description

Ketoprofen-d_4 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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