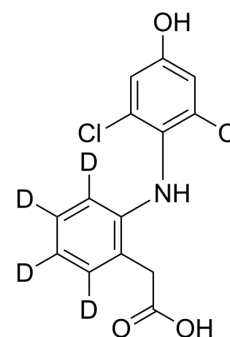


4'-Hydroxy diclofenac-d₄

Cat. No.:	HY-15550S		
CAS No.:	254762-27-1		
Molecular Formula:	C ₁₄ H ₇ D ₄ Cl ₂ NO ₃		
Molecular Weight:	316.17		
Target:	Drug Metabolite		
Pathway:	Metabolic Enzyme/Protease		
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 (316.29 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	3.1629 mL	15.8143 mL	31.6286 mL
5 mM	0.6326 mL	3.1629 mL	6.3257 mL
10 mM	0.3163 mL	1.5814 mL	3.1629 mL

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

BIOLOGICAL ACTIVITY

Description

4'-Hydroxy diclofenac-d₄ is the deuterium labeled 4'-Hydroxy diclofenac. 4'-Hydroxy diclofenac is an orally active metabolite of Diclofenac (HY-15036) by cytochrome P450 2C9 (CYP2C9). 4'-Hydroxy diclofenac has anti-inflammatory and analgesic properties[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]. J Shimamoto, et al. Lack of Differences in Diclofenac (A Substrate for CYP2C9) Pharmacokinetics in Healthy Volunteers With Respect to the Single CYP2C9*3 Allele. *Eur J*

Clin Pharmacol. 2000 Apr;56(1):65-8.

[3]. Hidetaka Kamimura, et al. Formation of the Accumulative Human Metabolite and Human-Specific Glutathione Conjugate of Diclofenac in TK-NOG Chimeric Mice With Humanized Livers. Drug Metab Dispos. 2015 Mar;43(3):309-16.

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

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