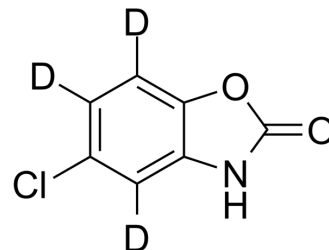


Chlorzoxazone-d₃

Cat. No.:	HY-B1462S		
CAS No.:	1185173-60-7		
Molecular Formula:	C ₇ HD ₃ ClNO ₂		
Molecular Weight:	172.58		
Target:	Cytochrome P450		
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 (579.44 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		5.7944 mL	28.9721 mL	57.9441 mL
	5 mM		1.1589 mL	5.7944 mL	11.5888 mL
	10 mM		0.5794 mL	2.8972 mL	5.7944 mL

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

BIOLOGICAL ACTIVITY

Description

Chlorzoxazone-d₃ is the deuterium labeled Chlorzoxazone. Chlorzoxazone is a centrally acting muscle relaxant used to treat muscle spasm and the resulting pain or discomfort. It acts on the spinal cord by depressing reflexes. Chlorzoxazone is currently being used as a marker substrate in vitro/vivo studies to quantify cytochrome P450 2E1 (CYP2E1) activity in humans.

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]. Yamamura Y, et al. Comprehensive kinetic analysis and influence of reaction components for chlorzoxazone 6-hydroxylation in human liver microsomes with CYP antibodies. *Xenobiotica*. 2015 Apr;45(4):353-360.

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

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