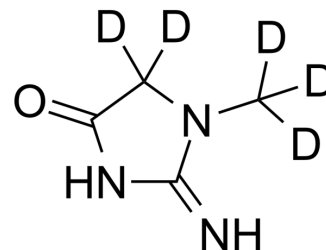


Creatinine-d₅

Cat. No.:	HY-B0504S2		
Molecular Formula:	C ₄ H ₂ D ₅ N ₃ O		
Molecular Weight:	118.15		
Target:	Endogenous 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

H₂O : 33.33 mg/mL (282.10 mM; Need ultrasonic)
 H₂O : 25 mg/mL (211.60 mM; Need ultrasonic)
 DMSO : 5 mg/mL (42.32 mM; ultrasonic and warming and heat to 60°C)
 DMSO : 2.5 mg/mL (21.16 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	8.4638 mL	42.3191 mL	84.6382 mL
	5 mM	1.6928 mL	8.4638 mL	16.9276 mL
	10 mM	0.8464 mL	4.2319 mL	8.4638 mL

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

BIOLOGICAL ACTIVITY

Description

Creatinine-d₅ is the deuterium labeled Creatinine. Creatinine (NSC13123) is a break-down product of creatine phosphate in muscle, and is usually produced at a fairly constant rate by the body.

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]. Allen, P.J., Creatine metabolism and psychiatric disorders: Does creatine supplementation have therapeutic value. *Neurosci Biobehav Rev.* 2012. 36(5): p. 1442-62.

[3]. Levey, A.S., et al., Using standardized serum creatinine values in the modification of diet in renal disease study equation for estimating glomerular filtration rate. Ann Intern Med, 2006. 145(4): p. 247-54.

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

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