# Creatinine-13C

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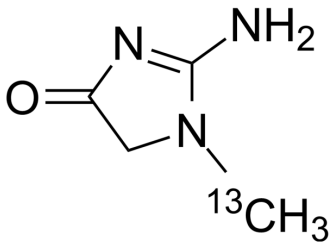
|---|---|
| **Cat. No.:** | HY-B0504S1 |
| **CAS No.:** | 1173022-95-1 |
| **Molecular Formula:** | $C_3{}^{13}CH_7N_3O$ |
| **Molecular Weight:** | 114.11 |
| **Target:** | Endogenous Metabolite |
| **Pathway:** | Metabolic Enzyme/Protease |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 6 months<br>-20°C 1 month |




## SOLVENT & SOLUBILITY

**In Vitro**

$H_2O$ : 62.5 mg/mL (547.72 mM; Need ultrasonic)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 8.7635 mL | 43.8174 mL | 87.6347 mL |
| 5 mM | 1.7527 mL | 8.7635 mL | 17.5269 mL |
| 10 mM | 0.8763 mL | 4.3817 mL | 8.7635 mL |

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

## BIOLOGICAL ACTIVITY

**Description**

Creatinine-13C (NSC13123-13C) is the 13C-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.



Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA