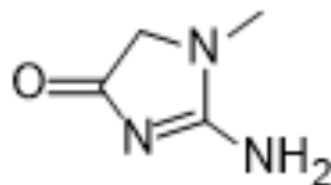


Creatinine

| | | | |
|---------------------------|--|-------|---------|
| Cat. No.: | HY-B0504 | | |
| CAS No.: | 60-27-5 | | |
| Molecular Formula: | C ₄ H ₇ N ₃ O | | |
| Molecular Weight: | 113.12 | | |
| Target: | Endogenous Metabolite | | |
| Pathway: | Metabolic Enzyme/Protease | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 2 years |
| | | -20°C | 1 year |



SOLVENT & SOLUBILITY

In Vitro

H₂O : 33.33 mg/mL (294.64 mM; Need ultrasonic)
 DMSO : 2.5 mg/mL (22.10 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent Concentration | Mass | | |
|---------------------------|-----------------------|-----------|------------|------------|
| | | 1 mg | 5 mg | 10 mg |
| | 1 mM | 8.8402 mL | 44.2008 mL | 88.4017 mL |
| | 5 mM | 1.7680 mL | 8.8402 mL | 17.6803 mL |
| | 10 mM | 0.8840 mL | 4.4201 mL | 8.8402 mL |

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

In Vivo

1. Add each solvent one by one: PBS
 Solubility: 33.33 mg/mL (294.64 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Creatinine (NSC13123) is a break-down product of creatine phosphate in muscle, and is usually produced at a fairly constant rate by the body. Target: Others Creatinine is a breakdown product of creatine phosphate in muscle, and is usually produced at a fairly constant rate by the body (depending on muscle mass). Creatine is synthesized primarily in the liver from the methylation of glycochamine (guanidino acetate, synthesized in the kidney from the amino acids arginine and glycine) by S-adenosyl methionine. It is then transported through blood to the other organs, muscle, and brain, where, through phosphorylation, it becomes the high-energy compound phosphocreatine. During the reaction, creatine and phosphocreatine are catalyzed by creatine kinase, and a spontaneous conversion to creatinine may occur [1]. Creatinine levels in blood and urine may be used to calculate the creatinine clearance (CrCl), which reflects the glomerular filtration rate (GFR), an important clinical index of renal function [2].

IC₅₀ & Target

| | |
|----------------------|-----------------------------|
| Microbial Metabolite | Human Endogenous Metabolite |
|----------------------|-----------------------------|

CUSTOMER VALIDATION

- Appl Surf Sci. 2018 Nov 1, 457:684-694.
- Research Square Preprint. 2021 Aug.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Allen, P.J., Creatine metabolism and psychiatric disorders: Does creatine supplementation have therapeutic value. *Neurosci Biobehav Rev*, 2012. 36(5): p. 1442-62.
- [2]. 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.
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Caution: Product has not been fully validated for medical applications. For research use only.

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