Caracemide

Cat. No.: HY-119974

CAS No.: 81424-67-1

Molecular Formula: $C_6H_{11}N_3O_4$

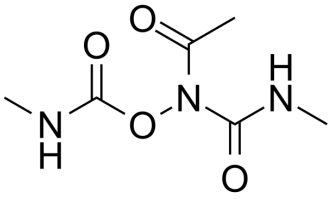
Molecular Weight: 189.17

Target: DNA/RNA Synthesis; Bacterial

Pathway: Cell Cycle/DNA Damage; Anti-infection

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 (528.63 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	5.2863 mL	26.4313 mL	52.8625 mL
	5 mM	1.0573 mL	5.2863 mL	10.5725 mL
	10 mM	0.5286 mL	2.6431 mL	5.2863 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (13.22 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (13.22 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (13.22 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Caracemide (NSC-253272) inhibits the enzyme ribonucleotide reductase of Escherichia coli. Caracemide is a novel anticancer agent derived from a hydroxamic acid and has demonstrated to produce severe central nervous system (CNS) toxicity[1][2].

In Vitro

Caracemide inactivates R1 by covalent modification at the substrate-binding site and has a toxic metabolite, methylisocyanate (MIC), in vivo[1][2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	The mercapturic acid derivative AMCC was identified in urine rats following administration to rats of a single i.p. dose (6.6 mg/kg) of caracemide (NSC-253272)[1]. . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Larsen IK, et al. Caracemide, a site-specific irreversible inhibitor of protein R1 of Escherichia coli ribonucleotide reductase. J Biol Chem. 1992 Jun 25;267(18):12627-31.

[2]. Slatter JG, et al. Studies on the metabolic fate of caracemide, an experimental antitumor agent, in the rat. Evidence for the release of methyl isocyanate in vivo. Chem Res Toxicol. 1993 May-Jun;6(3):335-40.

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