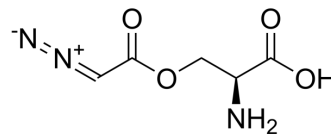


Azaserine

Cat. No.:	HY-B0919
CAS No.:	115-02-6
Molecular Formula:	C ₅ H ₇ N ₃ O ₄
Molecular Weight:	173.13
Target:	Bacterial; Antibiotic; DNA/RNA Synthesis
Pathway:	Anti-infection; Cell Cycle/DNA Damage
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 50 mg/mL (288.80 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		5.7760 mL	28.8800 mL	57.7601 mL
	5 mM		1.1552 mL	5.7760 mL	11.5520 mL
	10 mM		0.5776 mL	2.8880 mL	5.7760 mL

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

BIOLOGICAL ACTIVITY

Description

Azaserine (CI-337) is a competitive inhibitor of glutamine amidotransferase. Azaserine is an antibiotic, it shows antibacterial activities. Azaserine shows anti-tumor activities and it may also act as a tumor inducer. Azaserine can be used for the research of cancer and infection^{[1][2][3][4][5]}.

In Vitro

Azaserine (100 µg/mL; 6 h) causes some specific types of morphological changes of the sensitive organisms such as the characteristic elongation of *Candida albicans* cells^[2].
Azaserine (0-10 µM) inhibits the growth of *E. coli* strains with MIC values of 12.11, 51.9, 69.2 and 69.2 µg/mL for UTH 4, UTH 7036, UTH 7048 and UTH 7049^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Azaserine (5 mg/kg; i.p. once or twice a week for 6 months) induces tumor in rats^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Wistar rats ^[1]
Dosage:	5 mg/kg

Administration:	Intraperitoneal injection; 5 mg/kg once or twice a week for 6 month
Result:	After 1 year most pancreases from treated rats were diffusely abnormal and contained many hyperplastic nodules and adenomas and more than rats one-quarter showed pancreatic adenocarcinoma.

CUSTOMER VALIDATION

- Cell Rep. 2024 Jan 30;43(2):113724.
- Acta Biochim Biophys Sin (Shanghai). 2023 Mar 20;55(8):1288-1300.

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- [1]. Longnecker DS, Curphey T.J. Adenocarcinoma of the pancreas in azaserine-treated rats. *Cancer Res.* 1975 Aug;35(8):2249-58.
- [2]. Shigemichi GUNJI, et al. Screening of Antifungal Antibiotics According to Activities Inducing Morphological Abnormalities. *Agric. Biol Chem.*, 47 (9), 2061-2069, 1983.
- [3]. Williams MV, Tritz GJ. Studies on the modes of action of azaserine inhibition of Escherichia coli. Potentiation of phenylalanine reversal. *J Antimicrob Chemother.* 1977 Jan;3(1):65-77.
- [4]. Catane R, et al. Azaserine, DON, and azotomycin: three diazo analogs of L-glutamine with clinical antitumor activity. *Cancer Treat Rep.* 1979 Jun;63(6):1033-8.
- [5]. Lyons SD, et al. Cytotoxic mechanisms of glutamine antagonists in mouse L1210 leukemia. *J Biol Chem.* 1990 Jul 5;265(19):11377-81.

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

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