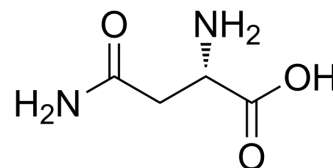


## L-Asparagine

<b>Cat. No.:</b>	HY-N0667		
<b>CAS No.:</b>	70-47-3		
<b>Molecular Formula:</b>	C <sub>4</sub> H <sub>8</sub> N <sub>2</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	132.12		
<b>Target:</b>	Endogenous Metabolite		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 6.67 mg/mL (50.48 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	7.5689 mL	37.8444 mL	75.6888 mL
		5 mM	1.5138 mL	7.5689 mL	15.1378 mL
10 mM		0.7569 mL	3.7844 mL	7.5689 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 10 mg/mL (75.69 mM); Clear solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

<b>Description</b>	L-Asparagine ((-)-Asparagine) is a non-essential amino acid involved in the metabolic control of nerve and brain tissue cell function. L-Asparagine has antitumor activity <sup>[1][2][3]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	Microbial Metabolite	Human Endogenous Metabolite
<b>In Vitro</b>	L-Asparagine (0.03 mM) can reverse the proliferation decline of six human cancer cells induced by ASNS siRNA knockdown <sup>[2]</sup> . L-Asparagine (10 mM, 4 h) can stimulate ODC activity and proliferation in IPEC-J2 cells <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

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## CUSTOMER VALIDATION

- Acta Pharm Sin B. 2022 Sep;12(9):3618-3638.
- Commun Biol. 2023 Jul 7;6(1):696.

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## REFERENCES

- [1]. Chiu M, et al. Asparagine Synthetase in Cancer: Beyond Acute Lymphoblastic Leukemia. Front Oncol. 2020 Jan 9;9:1480.
- [2]. Pathria G, et al. Translational reprogramming marks adaptation to asparagine restriction in cancer. Nat Cell Biol. 2019 Dec;21(12):1590-1603.
- [3]. Kandil HM, et al. L-glutamine and L-asparagine stimulate ODC activity and proliferation in a porcine jejunal enterocyte line. Am J Physiol. 1995 Oct;269(4 Pt 1):G591-9.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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