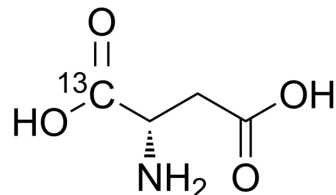


L-Aspartic acid-¹³C

Cat. No.:	HY-N0666S		
CAS No.:	81201-97-0		
Molecular Formula:	C ₃ ¹³ CH ₇ NO ₄		
Molecular Weight:	134		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H₂O : 5 mg/mL (37.31 mM; ultrasonic and warming and heat to 60°C)
 DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	7.4627 mL	37.3134 mL	74.6269 mL
	5 mM	1.4925 mL	7.4627 mL	14.9254 mL
	10 mM	0.7463 mL	3.7313 mL	7.4627 mL

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

In Vivo

1. Add each solvent one by one: PBS
 Solubility: 2 mg/mL (14.93 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

L-Aspartic acid-¹³C is a ¹³C labeled L-Aspartic acid. L-Aspartic acid is an amino acid, shown to be a suitable proagent for colon-specific agent delivery^{[1][2]}.

In Vitro

L-Aspartic acid is shown to be a suitable prodrug for colon-specific drug delivery^[1]. L-[3H]Asp remaining in the brain at 5 min is increased by 206 and 178% by preadministration of 100 mM L-Aspartic acid and 100 mM L-Glu, respectively, whereas 100 mM D-Asp does not affect L-[3H]Asp efflux transport. That value for L-[3H]Glu at 20 min is increased by 145 and 156% by coadministration with 100 mM L-Aspartic acid and 100 mM L-Glu, respectively, but not by D-Asp. It is interesting that the apparent efflux rate of L-Aspartic acid across the BBB is sevenfold faster than that of L-Glu^[2].

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

REFERENCES

- [1]. Leopold CS, et al. In vivo pharmacokinetic study for the assessment of poly(L-aspartic acid) as a drug carrier for colon-specific drug delivery. J Pharmacokinet Biopharm. 1995 Aug;23(4):397-406.
- [2]. Hosoya K, et al. Blood-brain barrier produces significant efflux of L-aspartic acid but not D-aspartic acid: in vivo evidence using the brain efflux index method. J Neurochem. 1999 Sep;73(3):1206-11.
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Caution: Product has not been fully validated for medical applications. For research use only.

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