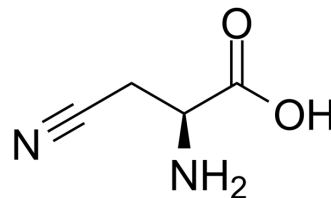


β-cyano-L-Alanine

Cat. No.:	HY-125773
CAS No.:	6232-19-5
Molecular Formula:	C ₄ H ₆ N ₂ O ₂
Molecular Weight:	114.1
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 20.83 mg/mL (182.56 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	8.7642 mL	43.8212 mL	87.6424 mL
		5 mM	1.7528 mL	8.7642 mL	17.5285 mL
	10 mM	0.8764 mL	4.3821 mL	8.7642 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (876.42 mM); Clear solution; Need ultrasonic				

BIOLOGICAL ACTIVITY

Description	β-cyano-L-Alanine (Beta-cyano-l-alanine), a nitrile of widespread occurrence in higher plants, is enzymatically produced by cyanoalanine synthase from cyanide and cysteine as substrates ^[1] . β-cyano-L-Alanine abolishes the protective effect of ethanol on cerebral ischemia/reperfusion (I/R) injury ^[2] .		
IC ₅₀ & Target	Human Endogenous Metabolite		
In Vivo	β-cyano-L-Alanine (intraperitoneally; 50 mg/kg) abolishes the protective effect of ethanol on cerebral ischemia/reperfusion (I/R) injury. MCE has not independently confirmed the accuracy of these methods. They are for reference only.		
	Animal Model:	Adult (postnatal age: 60 days) male C57BL/6J mice (25-30 g) gavaged with ethanol ^[2]	
	Dosage:	50 mg/kg	

Administration:	Intraperitoneally
Result:	Abolished the protective effect of ethanol on cerebral I/R injury.

REFERENCES

[1]. Piotrowski M, et al. The Arabidopsis thaliana isogene NIT4 and its orthologs in tobacco encode beta-cyano-L-alanine hydratase/nitrilase. *J Med Chem. J Biol Chem.* 2001 Jan 26;276(4):2616-21.

[2]. McCarter KD, et al. Influence of low-dose alcohol consumption on post-ischemic inflammation: Role of cystathionine γ -lyase. *Alcohol.* 2019 May;76:81-89.

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

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