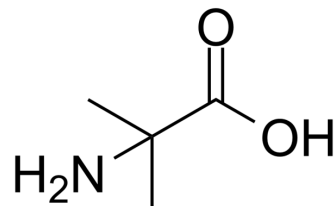


NSC 16590

Cat. No.:	HY-Y0124		
CAS No.:	62-57-7		
Molecular Formula:	C ₄ H ₉ NO ₂		
Molecular Weight:	103.12		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 33.33 mg/mL (323.22 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
Preparing Stock Solutions	1 mM	9.6974 mL	48.4872 mL	96.9744 mL
	5 mM	1.9395 mL	9.6974 mL	19.3949 mL
	10 mM	0.9697 mL	4.8487 mL	9.6974 mL
Please refer to the solubility information to select the appropriate solvent.				
In Vivo	1. Add each solvent one by one: PBS Solubility: 33.33 mg/mL (323.22 mM); Clear solution; Need ultrasonic			

BIOLOGICAL ACTIVITY

Description	NSC 16590 inhibits the production of endogenous ethylene in the cotyledonary segments of cocklebur.	
IC₅₀ & Target	Microbial Metabolite	Human Endogenous Metabolite
In Vitro	NSC 16590 (α-Aminoisobutyric acid , AIB) inhibits the production of endogenous ethylene in the cotyledonary segments of cocklebur (<i>Xanthium pennsylvanicum</i> Wallr.) seeds most strongly. NSC 16590 at 4 mM inhibits the formation of ethylene by about 50%, although the O ₂ uptake of the segments is not affected even at 20 mM. NSC 16590 also inhibits ethylene formation in the stem segments of etiolated pea (<i>Pisum sativum</i> L. cv. Alaska) seedlings. Kinetic analysis with cell free extracts from etiolated pea shoots reveals that NSC 16590 competitively inhibits the conversion of ACC into ethylene ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

REFERENCES

[1]. Shigeru Satoh, et al. α -Aminoisobutyric acid: A probable competitive inhibitor of conversion of 1-aminocyclopropane-1-carboxylic acid to ethylene. *Plant and Cell Physiology*, Volume 21, Issue 6, 1 September 1980, Pages 939-949.

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

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