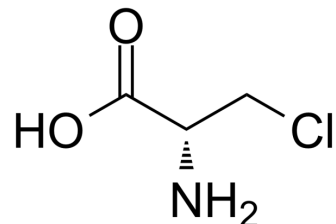


## β-Chloro-L-alanine

Cat. No.:	HY-107373		
CAS No.:	2731-73-9		
Molecular Formula:	C <sub>3</sub> H <sub>6</sub> ClNO <sub>2</sub>		
Molecular Weight:	123.54		
Target:	Bacterial		
Pathway:	Anti-infection		
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<sub>2</sub>O : ≥ 30 mg/mL (242.84 mM)  
 \* "≥" means soluble, but saturation unknown.

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	8.0945 mL	40.4727 mL	80.9454 mL
5 mM	1.6189 mL	8.0945 mL	16.1891 mL
10 mM	0.8095 mL	4.0473 mL	8.0945 mL

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

#### In Vivo

1. Add each solvent one by one: PBS  
 Solubility: 50 mg/mL (404.73 mM); Clear solution; Need ultrasonic

### BIOLOGICAL ACTIVITY

#### Description

β-Chloro-L-alanine is a bacteriostatic amino acid analog which inhibits a number of enzymes, including threonine deaminase and alanine racemase.

#### IC<sub>50</sub> & Target

Bacterial<sup>[1]</sup>

#### In Vitro

β-Chloro-L-alanine can inhibit threonine deaminase, the branched-chain amino acid transaminase (transaminase B), L-aspartate-pdecarboxylase, alanine racemase and probably O-acetylserine sulfhydrylase. β-Chloro-L-alanine reversibly inhibits the Escherichia coli K-12 alanine-valine transaminase, transaminase C. This inhibition, along with the inhibition of transaminase B, account for the isoleucine-plus-valine requirement of Escherichia coli in the presence of β-Chloro-L-alanine. Salmonella typhimurium LT2 will grow in the presence of BCA if isoleucine and valine are added to the medium and presume that the growth requirement is due to the inhibition of transaminase B<sup>[1]</sup>.

---

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

---

## REFERENCES

---

[1].  $\beta$ -Chloro-L-alanine can inhibits threonine deaminase, the branched-chain amino acid transaminase (transaminase B), L-aspartate-pdecarboxylase, alanine racemase and probably O-acetylserine sulfhydrylase.  $\beta$ -Chloro-L-alanine reversibly inhibits the Escheri

---

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA