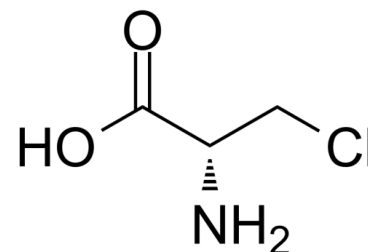


## Data Sheet

<b>Product Name:</b>	β-Chloro-L-alanine
<b>Cat. No.:</b>	CS-7792
<b>CAS No.:</b>	2731-73-9
<b>Molecular Formula:</b>	C <sub>3</sub> H <sub>6</sub> ClNO <sub>2</sub>
<b>Molecular Weight:</b>	123.54
<b>Target:</b>	Bacterial
<b>Pathway:</b>	Anti-infection
<b>Solubility:</b>	H <sub>2</sub> O : ≥ 30 mg/mL (242.84 mM)



### BIOLOGICAL ACTIVITY:

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>.

### References:

[1]. β-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. β-Chloro-L-alanine reversibly inhibits the Escherichia coli

### CAIndexNames:

L-Alanine, 3-chloro-

### SMILES:

OC([C@@H](N)CCl)=O

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

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