

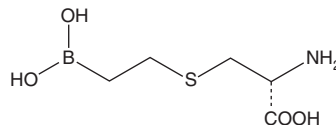
# PRODUCT INFORMATION



## BEC

Item No. 10170

**CAS Registry No.:** 63107-40-4  
**Formal Name:** S-(2-boronoethyl)-L-cysteine  
**MF:** C<sub>5</sub>H<sub>12</sub>BNO<sub>4</sub>S  
**FW:** 193.0  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

BEC is supplied as a crystalline solid. BEC is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that aqueous solutions of BEC be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of BEC in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

BEC is a potent slow-binding competitive inhibitor of recombinant rat liver arginase I with  $K_i$  values of 0.4 and 0.6  $\mu$ M from kinetic analyses.<sup>1</sup> It is also a potent inhibitor of human arginase II with  $K_i$  values of 310 and 30 nM at pH 7.5 and 9.5, respectively.<sup>2</sup> It does not inhibit murine iNOS at concentrations up to 1 mM. BEC significantly enhances nitric oxide-dependent relaxation of human penile corpus cavernosum smooth muscle *in vitro* when used at concentrations ranging from 0.1 to 1 mM.<sup>1</sup>

### References

1. Kim, N.N., Cox, J.D., Baggio, R.F., *et al.* Probing erectile function: S-(2-boronoethyl)-L-cysteine binds to arginase as a transition state analogue and enhances smooth muscle relaxation in human penile corpus cavernosum. *Biochemistry* **40**, 2678-2688 (2001).
2. Colleluori, D.M. and Ash, D.E. Classical and slow-binding inhibitors of human type II arginase. *Biochemistry* **40**, 9356-9362 (2001).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 04/15/2024

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM