

Product Data Sheet

Product Name: BEC (hydrochloride)

Cat. No.: GC42911

Chemical Properties

Cas. No. 222638-67-7

SMILES OB(O)CCSC[C@@H](C(O)=O)N.Cl

Formula C₅H₁₂BNO₄S•HCl

M.Wt 229.5

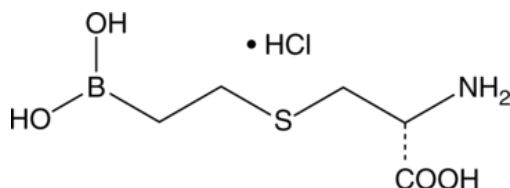
Solubility PBS (pH 7.2): 10 mg/ml

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

BEC hydrochloride is a slow-binding and competitive Arginase II inhibitor with K_i of 0.31 μ M (pH 7.5). target: Arginase II [1]; In vitro: BEC hydrochloride causes significant enhancement of NO-dependent smooth muscle relaxation in this tissue. [2] BEC hydrochloride enhances perivascular and peribronchiolar lung inflammation, mucus metaplasia, NF- κ B DNA binding, and mRNA expression of the NF- κ B-driven chemokine genes CCL20 and KC, and lead to further increases in airways hyperresponsiveness. [3] In vivo: BEC hydrochloride increased contractility in isolated myocytes from WT and NOS3 but not NOS1 knockout mice. [4]

References:

[1]. Colleluori DM et al. Classical and slow-binding inhibitors of human type II arginase. Biochemistry. 2001 Aug 7;40(31):9356-62.

[2]. Kim NN 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. 2001 Mar 6;40(9):2678-88.

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

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- [3]. Karina Ckless et al. Inhibition of Arginase Activity Enhances Inflammation in Mice with Allergic Airway Disease, in Association with Increases in Protein S-Nitrosylation and Tyrosine Nitration. J Immunol. Author manuscript; available in PMC 2010 Jun 28.
- [4]. Steppan J et al. Arginase modulates myocardial contractility by a nitric oxide synthase 1-dependent mechanism. Proc Natl Acad Sci U S A. 2006 Mar 21;103(12):4759-64.

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