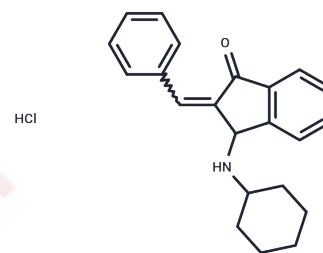


BCI hydrochloride

Chemical Properties

CAS No. :	95130-23-7
Formula:	C ₂₂ H ₂₄ ClNO
Molecular Weight:	353.89
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	BCI hydrochloride ((E)-BCI hydrochloride) is a selective dual-specificity phosphatase 6 (DUSP6) inhibitor that inhibits RANKL-mediated osteoclastogenesis and attenuates oophorectomy-induced bone loss. BCI hydrochloride has anti-inflammatory activity, reduces reactive oxygen species (ROS) production, and partially reverses AE-induced bone loss. BCI hydrochloride has anti-inflammatory activity and can reduce reactive oxygen species (ROS) production, partially reverse AE-induced cytotoxicity, and increase ERK activity, which can be used to study inflammatory diseases.
Targets(IC50)	Phosphatase
In vitro	BCI hydrochloride (100 ng/mL; 24 hr) was able to down-regulate DUSP6 expression in RAW264.7 macrophages. BCI hydrochloride (0-1 nM; 24 hr) inhibited DUSP6 expression, as well as IL-1 β and IL-6 production in lipopolysaccharide (LPS)-activated macrophages. BCI hydrochloride (0-4 nM; 24 hr), in turn reduced reactive oxygen species (ROS) production and activated the Nrf2 pathway in LPS-activated macrophages. [1][2]

Solubility Information

Solubility	DMSO: 10 mg/mL (28.26 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.83 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8257 mL	14.1287 mL	28.2574 mL
5 mM	0.5651 mL	2.8257 mL	5.6515 mL
10 mM	0.2826 mL	1.4129 mL	2.8257 mL
50 mM	0.0565 mL	0.2826 mL	0.5651 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Korotchenko VN, et al. In vivo structure-activity relationship studies support allosteric targeting of a dual specificity phosphatase. *Chembiochem*. 2014 Jul 7;15(10):1436-45.

Zhang F, et al. DUSP6 Inhibitor (E/Z)-BCI Hydrochloride Attenuates Lipopolysaccharide-Induced Inflammatory Responses in Murine Macrophage Cells via Activating the Nrf2 Signaling Axis and Inhibiting the NF- κ B Pathway. *Inflammation*. 2019 Apr;42(2):672-681.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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