

Product Name: BCI

Catalog No.: 7481

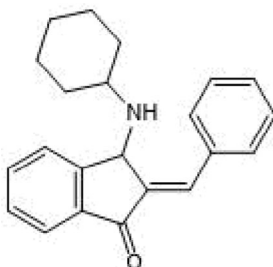
Batch No.: 1

CAS Number: 15982-84-0

IUPAC Name: 3-(Cyclohexylamino)-2,3-dihydro-2-(phenylmethylene)-1*H*-inden-1-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₃NO
Batch Molecular Weight: 317.42
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
 ethanol to 50 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	83.24	7.3	4.41
Found	83.51	7.41	4.43

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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IUPAC Name: 3-(Cyclohexylamino)-2,3-dihydro-2-(phenylmethylene)-1*H*-inden-1-one

Description:

BCI is an allosteric inhibitor of dual specificity phosphatase DUSP6 and DUSP1 (EC₅₀ values are 8.0 μM and 13.3 μM respectively). Increases P2X7 receptor expression in neuroblastoma cells, reduces cell viability of EGFR or KRAS mutant lung cancer cells, and induces apoptosis in p53-null non-small cell lung cancer cells. In an animal model of myocardial infarction, BCI improves heart function, reduces fibrosis, and reduces inflammation by inhibiting macrophage formation. Activates FGF signaling in zebrafish embryo development to increase myocardial progenitor population and heart size.

Physical and Chemical Properties:

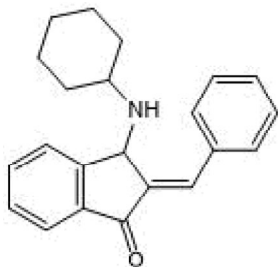
Batch Molecular Formula: C₂₂H₂₃NO

Batch Molecular Weight: 317.42

Physical Appearance: Yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Zhang *et al* (2023) A DUSP6 inhibitor suppresses inflammatory cardiac remodeling and improves heart function after myocardial infarction. *Dis.Model.Mech.* **16** dmm049662. PMID: 36478044.

Benito-León *et al* (2022) BCI, an inhibitor of the DUSP1 and DUSP6 dual specificity phosphatases, enhances P2X7 receptor expression in neuroblastoma cells. *Front.Cell Dev.Biol.* **15** 1049566. PMID: 36589747.

Shin *et al* (2018) BCI induces apoptosis via generation of reactive oxygen species and activation of intrinsic mitochondrial pathway in H1299 lung cancer cells. *Sci.China Life Sci.* **61** 1243. PMID: 29524123.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956