

Certificate of Analysis

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Product Name: BIO

Catalog No.: 3194

Batch No.: 3

CAS Number: 667463-62-9

IUPAC Name: (2'Z,3'E)-6-Bromoindirubin-3'-oxime

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₁₀BrN₃O₆·³/₄H₂O

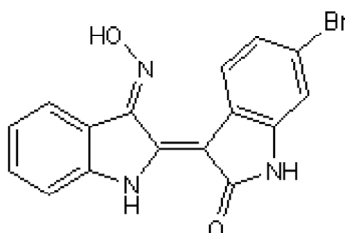
Batch Molecular Weight: 369.68

Physical Appearance: Red solid

Solubility: DMSO to 10 mM
ethanol to 10 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.5% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

| | Carbon Hydrogen Nitrogen | | |
|-------------|--------------------------|------|-------|
| Theoretical | 51.98 | 3.14 | 11.37 |
| Found | 52.13 | 2.88 | 11.17 |

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

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IUPAC Name: (2'Z,3'E)-6-Bromoindirubin-3'-oxime

Description:

BIO is a potent ATP-competitive glycogen synthase kinase-3 (GSK-3) inhibitor ($IC_{50} = 5 \text{ nM}$). Also inhibits cyclin-dependent kinases (cdks; IC_{50} values are

Storage: Store at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{16}H_{10}BrN_3O_6 \cdot \frac{3}{4}H_2O$

Batch Molecular Weight: 369.68

Physical Appearance: Red solid

Solubility & Usage Info:

DMSO to 10 mM

ethanol to 10 mM

Minimum Purity: ≥98%

Stability and Solubility Advice:

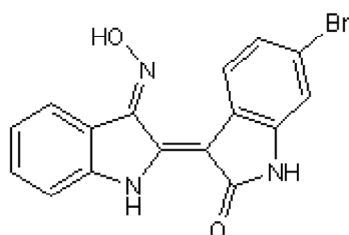
Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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.

Batch Molecular Structure:



References:

Jorda *et al* (2018) How selective are pharmacological inhibitors of cell-cycle-regulating cyclin-dependent kinases? *J.Med.Chem.* **61** 9105. PMID: 30234987.

Tseng *et al* (2006) The GSK-3 inhibitor BIO promotes proliferation in mammalian cardiomyocytes. *Chem.Biol.* **13** 957. PMID: 16984885.

Polychronopoulos *et al* (2004) Structural basis for the synthesis of indirubins as potent and selective inhibitors of glycogen synthase kinase-3 and cyclin dependent kinases. *J.Med.Chem.* **47** 935. PMID: 14761195.

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