

## Certificate of Analysis

**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:** C<sub>16</sub>H<sub>10</sub>BrN<sub>3</sub>O<sub>6</sub>·¾H<sub>2</sub>O

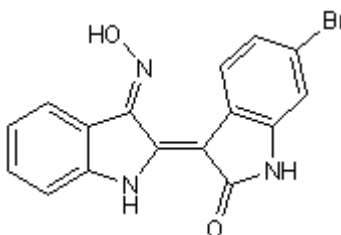
**Batch Molecular Weight:** 369.68

**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 99.1% purity

**<sup>1</sup>H 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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**Description:**

Potent and selective, ATP-competitive glycogen synthase kinase-3 (GSK-3) inhibitor (IC<sub>50</sub> values are 5, 83, 300, 320 and > 10 000 nM at GSK-3, CDK5/p25, CDK2/cyclin A, CDK1/cyclin B and other common kinases respectively). Maintains self-renewal and pluripotency in embryonic stem cells via activation of the Wnt signaling pathway in vitro; also promotes proliferation and dedifferentiation in cardiomyocytes. Negative control available (Cat. No. 3873).

**Physical and Chemical Properties:**

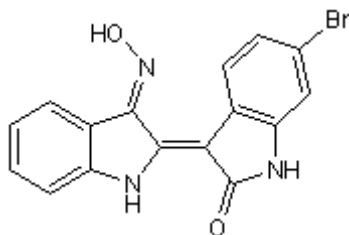
Batch Molecular Formula: C<sub>16</sub>H<sub>10</sub>BrN<sub>3</sub>O<sub>6</sub>·<sup>3</sup>/<sub>4</sub>H<sub>2</sub>O

Batch Molecular Weight: 369.68

Physical Appearance: Red solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Meijer et al** (2003) GSK-3-selective inhibitors derived from tyrian purple indirubins. *Chem.Biol.* **10** 1255. PMID: 14700633.

**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.

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

**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.

**Solubility & Usage Info:**

DMSO to 10 mM

ethanol to 10 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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