TOCRIS bioscience

Print Date: Apr 28th 2015

Certificate of Analysis

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Product Name: **Indirubin-3'-oxime** **Catalog No.: 1813** **Batch No.: 1**

CAS Number: 160807-49-8

IUPAC Name: 3-[1,3-Dihydro-3-(hydroxyimino)-2*H*-indol-2-ylidene]-1,3-dihydro-2*H*-indol-2-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{11}N_3O_2 \cdot \frac{3}{4}H_2O$

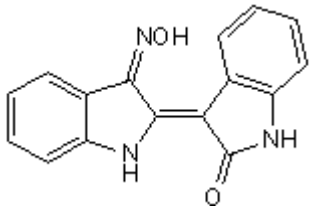
Batch Molecular Weight: 290.79

Physical Appearance: Red solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.58 (Dichloromethane:Methanol [10:1])

Melting Point: Greater than 250°C

HPLC: Shows >99.7% purity

^{1}H NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.09	4.33	14.45
Found	66.29	4.2	14.78

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Description:

Protein kinase inhibitor; inhibits cyclin-dependent kinases (IC_{50} = 0.18 - 3.33 µM) and GSK-3β (IC_{50} = 0.19 µM). Inhibits CDK5- and GSK-3β-mediated tau phosphorylation, a process over-active in Alzheimer disease states. Also inhibits AMPK, LCK and SGK. Induces cell cycle arrest and inhibits cell proliferation.

Physical and Chemical Properties:

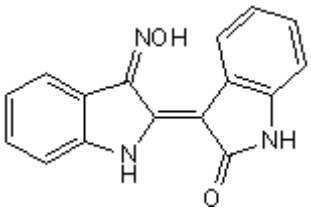
Batch Molecular Formula: $C_{16}H_{11}N_3O_2.¾H_2O$

Batch Molecular Weight: 290.79

Physical Appearance: Red solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

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 100 mM
ethanol to 100 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.

References:

Hoessel *et al* (1999) Indirubin, the active constituent of a Chinese antileukaemia medicine, inhibits cyclin-dependent kinases. Nat.Cell.Biol. ***1*** 60. PMID: 10559866.

Leclerc *et al* (2001) Indirubins inhibit glycogen synthase kinase-3β and CDK5/p25, two protein kinases involved in abnormal tau phosphorylation in Alzheimer's disease. J.Biol.Chem. ***276*** 251. PMID: 11013232.

Bain *et al* (2003) The specificities of protein kinase inhibitors: an update. Biochem.J. ***371*** 199. PMID: 12534346.