

Product Name: Indirubin-3'-oxime

Catalog No.: 1813

Batch No.: 1

CAS Number: 160807-49-8

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₁₁N₃O₂·¾H₂O

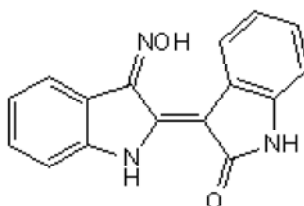
Batch Molecular Weight: 290.79

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 99.3% purity

¹H NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.09	4.33	14.45
Found	66.29	4.2	14.78

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

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Description:

Inhibitor of GSK-3 β (IC₅₀ = 190 nM) and cyclin dependent kinases (cdks; IC₅₀ values are 0.05, 0.18 and 0.25-0.5 μ M for cdk9, cdk1 and cdk2, respectively). Also reported to inhibit AMPK, LCK and SGK. Inhibits cdk5- and GSK-3 β -mediated tau phosphorylation. Induces cell cycle arrest and inhibits cell proliferation.

Physical and Chemical Properties:

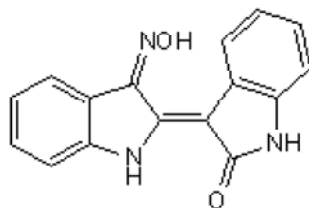
Batch Molecular Formula: C₁₆H₁₁N₃O₂· $\frac{3}{4}$ H₂O

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:

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

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

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

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

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