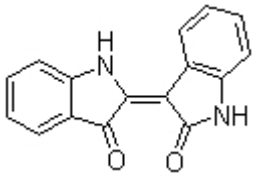
Product Introduction

Indirubin

Indirubin is a potent cyclin-dependent kinases and GSK-3β inhibitor with IC50 of about 5 μM and 0.6 μM

Technical Data:

Molecular Weight (MW):	262,26	
Formula:	$C_{16}H_{10}N_2O_2$	
Solubility (25°C) * <1 mg/ml means slightly soluble or insoluble:	DMSO 53 mg/mL	
	Water <1 mg/mL	
	Ethanol <1 mg/mL	
Purity:	>98%	
Storage:	3 years -20℃Powder	
	6 months-80℃in DMSO	
CAS No.:	479-41-4	

Biological Activity

Indirubin is the active ingredient of Danggui Longhui Wan, a mixture of plants that is used in traditional Chinese medicine to treat chronic diseases. Indirubin inhibits CDKs activity with IC50 of 2.2 - 10 μM resulting in cell cycle arrest in the G2/M phase. [1] Indirubin also inhibits GSK-3β with an IC50 of 0.6 μM, attenuating CDK5- and GSK-3β-mediated tau phosphorylation, a process over-active in Alzheimer disease states. [2] It also suppresses tumor necrosis factor (TNF)-induced NF-κB activation in a dose- and time-dependent manner. Indirubin also suppresses the NF-κB activation induced by various inflammatory agents and carcinogens. Indirubin blocks the phosphorylation and degradation of IκBα through the

inhibition of activation of IκBα kinase and phosphorylation and nuclear translocation of p65. [3

References

[1] Hoessel R, et al. Nat Cell Biol, 1999, 1(1), 60-67.

[2] Leclerc S, et al. J Biol Chem, 2001, 276(1), 251-260.

[3] Sethi G, et al. J Biol Chem, 2006, 281(33), 23425-2335.

Note： Products protected by valid patents are not offered for sale in countries where the sale of such products constitutes a patent infringement and its liability is at buyer’s risk. This item is only for R&D purpose not for commercial business in kilos. Buyers should overview the patent issue in their countries.