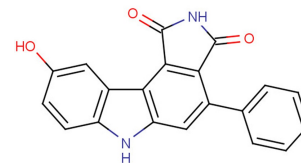


PD 407824

Chemical Properties

CAS No.:	622864-54-4
Formula:	C ₂₀ H ₁₂ N ₂ O ₃
Molecular Weight:	328.32
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	PD 407824 is a chemical BMP sensitizer and increases the sensitivity of cells to sub-threshold amounts of BMP4. PD 407824 is a checkpoint kinase Chk1 and WEE1 inhibitor (IC ₅₀ s: 47 and 97 nM, respectively).
Targets(IC ₅₀)	Chk1: 47 nM WEE1: 97 nM
In vitro	PD 407824 is selective for Chk1 and WEE1 over PKC and Cdk4 (IC ₅₀ s: 3.4 μM and 3.75 μM, respectively). PD 407824 is sufficient to block CHK1, leading to a significant down-regulation of p21, causing activation of CDK8/9, which in turn induces depletion of SMAD2/3 [1] [3].

Solubility Information

Solubility	DMSO: 250 mg/mL (761.45 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.046 mL	15.229 mL	30.458 mL
5 mM	0.609 mL	3.046 mL	6.092 mL
10 mM	0.305 mL	1.523 mL	3.046 mL
50 mM	0.061 mL	0.305 mL	0.609 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Palmer BD, et al. 4-Phenylpyrrolo[3,4-c]carbazole-1,3(2H,6H)-dione inhibitors of the checkpoint kinase Wee1. Structure-activity relationships for chromophore modification and phenyl ring substitution. J Med Chem. 2006 Aug 10;49(16):4896-911.
2. Feng L, et al. Discovery of a Small-Molecule BMP Sensitizer for Human Embryonic Stem Cell Differentiation. Cell Rep. 2016 May 31;15(9):2063-75.
3. Smaill JB, et al. Synthesis and structure-activity relationships of N-6 substituted analogues of 9-hydroxy-4-phenylpyrrolo[3,4-c]carbazole-1,3(2H,6H)-diones as inhibitors of Wee1 and Chk1 checkpointkinases. Eur J Med Chem. 2008 Jun;43(6):1276-96. Epub 2007 Aug 6.

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