

Product Name: IPA 3

Catalog No.: 3622

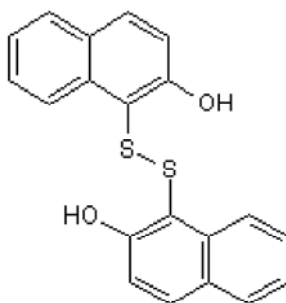
Batch No.: 3

CAS Number: 42521-82-4

IUPAC Name: 1,1'-Dithiodi-2-naphthol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₁₄O₂S₂
Batch Molecular Weight: 350.45
Physical Appearance: Yellow solid
Solubility: DMSO to 75 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 96.1% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	68.55	4.03	
Found	68.23	3.93	

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

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CAS Number: 42521-82-4

IUPAC Name: 1,1'-Dithiodi-2-naphthol

Description:

Group I p21-activated kinase (PAK) inhibitor (IC_{50} = 2.5 μ M at PAK1). Targets the autoregulatory mechanism and promotes the inactive conformation of PAKs. Inhibits PAK1-mediated signaling in vivo; potential anti-tumor agent. Negative Control also available.

Physical and Chemical Properties:

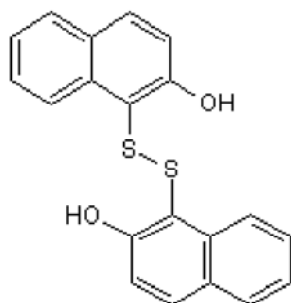
Batch Molecular Formula: $C_{20}H_{14}O_2S_2$

Batch Molecular Weight: 350.45

Physical Appearance: Yellow solid

Minimum Purity: $\geq 96\%$

Batch Molecular Structure:



References:

Wang *et al* (2016) P21-activated kinase inhibitors FRAX486 and IPA3: inhibition of prostate stromal cell growth and effects on smooth muscle contraction in the human prostate. *PLoS One* **11** e0153312. PMID: 27071060.

Takahashi and Suzuki (2009) Membrane transport of WAVE2 and lamellipodia formation require Pak1 that mediates phosphorylation and recruitment of stathmin/op18 to Pak1-WAVE2-kinesin complex. *Cell.Signal.* **21** 695. PMID: 19162178.

Viaud and Peterson (2009) An allosteric kinase inhibitor binds the p21-activated kinase (Pak) autoregulatory domain covalently. *Mol.Cancer Ther.* **8** 2559. PMID: 19723886.

Deacon *et al* (2008) An isoform-selective, small-molecule inhibitor targets the autoregulatory mechanism of p21-activated kinase. *Chem.Biol.* **15** 322. PMID: 18420139.

Kumar *et al* (2006) p21-activated kinases in cancer. *Nat.Rev.Cancer* **6** 459. PMID: 16723992.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 75 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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