

## Catalog #10-4765 IPA-3

CAS# 42521-82-4 1,1'-Dithiodi-2-naphthol Lot # FBA4041



IPA-3 is a selective allosteric inhibitor of Group 1 p21-activated kinase (PAK1  $IC_{50} = 2.5 \mu M$ )<sup>1</sup> via covalent binding to the PAK1 regulatory domain preventing binding to the upstream activator Cdc42<sup>2</sup>. IPA-3 has been shown to induce cell death in human leukemic cell lines<sup>3</sup>, significantly inhibit TGF $\beta$ 1-induced prostate cell epithelial to mesenchymal transition<sup>4</sup> and inhibits the growth of liver cancer cells<sup>5</sup>.

- 1) Deacon et al. (2008) An isoform-selective, small-molecule inhibitor targets the autoregulatory mechanism of p21activated kinase Chem.Biol. **14** 322
- 2) Viaud and Peterson (2009) An allosteric kinase inhibitor binds the p21-activated kinase (PAK) autoregulatory domain covalently Mol. Cancer Ther. 8 2559
- 3) Kuzelova et al. (2014) Group 1 PAK Inhibitor IPA-3 Induces Cell Death and Affects Cell Adhesivity to Fibronectin in Human Hematopoietic Cells PLoS One **9** e92560
- 4) Al-Azayzih et al. (2015) P21 Activated Kinase-1 Mediates Transforming Growth factor b1-Induced Prostate Cancer Cell Epithelial to Mesenchymal transition Biochim.Biophys.Acta **1853** 1229
- 5) Wong et al. (2013) *IPA-3 Inhibits the Growth of Liver Cancer Cells By Suppressing PAK1 and NF-kB Activation* PLoS One **8** e68843

## PHYSICAL DATA

Molecular Weight:	350.45
Molecular Formula:	C <sub>20</sub> H <sub>14</sub> O <sub>2</sub> S <sub>2</sub>
Purity:	>98% by TLC (Methylene chloride; Rf = 0.75)
	NMR: (Conforms)
Solubility:	DMSO (25 mg/ml)
Physical Description:	Yellow solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in
	DMSO may be stored at $-20^{\circ}$ C for up to 3 months.

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