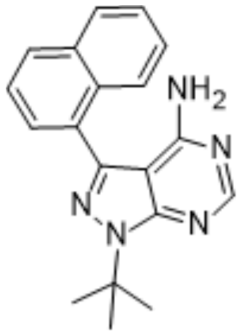
1-Naphthyl PP1

Cat. No.:	HY-13941
CAS No.:	221243-82-9
Molecular Formula:	$C_{19}H_{19}N_5$
Molecular Weight:	317.39
Target:	Src; PKD
Pathway:	Protein Tyrosine Kinase/RTK; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 12.5 mg/mL (39.38 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1507 mL	15.7535 mL	31.5070 mL
	5 mM	0.6301 mL	3.1507 mL	6.3014 mL
	10 mM	0.3151 mL	1.5753 mL	3.1507 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.25 mg/mL (3.94 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (3.94 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

1-Naphthyl PP1 (1-NA-PP 1) is a selective inhibitor of src family kinases and Protein Kinase D. 1-Naphthyl PP1 inhibits v-Src and c-Fyn, c-Abl, CDK2 and CAMK II with IC_{50}s of 1.0, 0.6, 0.6, 18 and 22 μM, respectively[1][2][3].

IC_{50} & Target

PKD1	PKD2	PKD3
154.6 nM (IC_{50})	133.4 nM (IC_{50})	109.4 nM (IC_{50})

In Vitro

1-Naphthyl PP1 inhibits PKD1, 2, and 3 with IC_{50}s of 154.6 nM, 133.4 nM, 109.4 nM respectively[2].
1-Naphthyl PP1 (0-70 μM, 45 min) inhibits Phorbol 12-myristate 13-acetate (HY-18739) induced autophosphorylation at p-Ser^{916}-PKD1 in LNCaP cells with an IC_{50} of 22.5 μM[2].
1-Naphthyl PP1 (0-100 μM, 72 h) inhibits PC3 cell proliferation, survival, and arrested cells in G2/M (10 μM, 48 h)[2].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	1-Naphthyl PP1 (30 mg/kg, i.p.) reversibly reduces ethanol consumption by ATP analog-specific PKCε (AS-PKCε) mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Plant J. 2019 Mar;97(5):970-983.

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REFERENCES

[1]. Maiya R, et al. Selective chemical genetic inhibition of protein kinase C epsilon reduces ethanol consumption in mice. Neuropharmacology. 2016 Aug;107:40-48.

[2]. Bishop AC, et al. A chemical switch for inhibitor-sensitive alleles of any protein kinase. Nature. 2000 Sep 21;407(6802):395-401.

[3]. Tandon M, et al. New pyrazolopyrimidine inhibitors of protein kinase d as potent anticancer agents for prostate cancer cells. PLoS One. 2013 Sep 23;8(9):e75601.

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