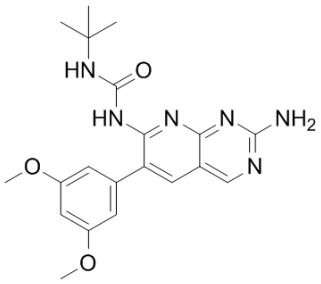
PD-166866

Cat. No.:	HY-101296
CAS No.:	192705-79-6
Molecular Formula:	$C_{20}H_{24}N_6O_3$
Molecular Weight:	396.44
Target:	FGFR; Autophagy
Pathway:	Protein Tyrosine Kinase/RTK; Autophagy
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 10.33 mg/mL (26.06 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5224 mL	12.6122 mL	25.2245 mL
	5 mM	0.5045 mL	2.5224 mL	5.0449 mL
	10 mM	0.2522 mL	1.2612 mL	2.5224 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1 mg/mL (2.52 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1 mg/mL (2.52 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PD166866 is a selective FGFR1 tyrosine kinase inhibitor with an IC_{50} of 52.4 nM.

IC_{50} & Target

FGFR1
52.4 nM (IC_{50})

In Vitro

PD 166866 inhibits human full-length FGFR-1 tyrosine kinase with an IC_{50} value of 52.4 nM and is characterized as an ATP competitive inhibitor of the FGFR-1. PD 166866 is a potent inhibitor of FGFR autophosphorylation in NIH 3T3 cells expressing endogenous FGFR-1 and in L6 cells overexpressing the human FGFR-1 tyrosine kinase. PD 166866 also inhibits bFGF-induced tyrosine phosphorylation of the 44- and 42-kDa (ERK 1/2) mitogen-activated protein kinase isoforms in L6 cells. Daily exposure of PD 166866 to L6 cells at concentrations from 1 to 100 nM results in a concentration-related inhibition of bFGF-

stimulated cell growth for 8 consecutive days with an IC_{50} value of 24 nM[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]

PD 166866 is dissolved in DMSO. PD 166866 or vehicle (0.5% DMSO, final concentration) are added every day to triplicate cultures of cells together with 25 ng/mL bFGF to stimulate FGF-driven growth. In some experiments, PD 166866 is added every day to triplicate cultures of cells together with 30 ng/mL PDGF-BB to stimulate PDGF-driven growth. Cell number is measured by Coulter counting on days 1, 3, 6 or 8 after drug exposure[1]

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Commun. 2020 Jun 22;11(1):3162.

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REFERENCES

[1]. Panek RL, et al. In vitro biological characterization and antiangiogenic effects of PD 166866, a selective inhibitor of the FGF-1 receptor tyrosine kinase. J Pharmacol Exp Ther. 1998 Jul;286(1):569-77.

Caution: Product has not been fully validated for medical applications. For research use only.

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