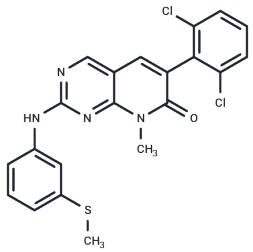
Data Sheet (Cat.No.T3063)

TargetMol

PD173955

Chemical Properties



CAS No. : 260415-63-2

Formula: C21H16Cl2N4OS

Molecular Weight: 443.35

Appearance: no data available

Storage: store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	PD173955 is src family-selective tyrosine kinase inhibitor with IC50 of ~22 nM for Src, Yes and Abl kinase; less potent for FGFRα and no activity on InsR and PKC.
Targets(IC50)	Apoptosis,Bcr-Abl,Src
In vivo	PD173955 serves as a Src inhibitor, effectively inhibiting mitotic progression during the early stages of mitosis across various cell types while inducing apoptosis to varying degrees. It efficiently suppresses Bcr-Abl-dependent cellular growth, displaying an IC50 value of 2-35 nM in Bcr-Abl-positive cell lines, which is approximately 100 to 200 times more sensitive than in Bcr-Abl-negative cell lines. Additionally, PD173955 inhibits the stem cell factor-dependent proliferation of M07e cells by blocking the ligand-dependent autophosphorylation of c-kit, with an IC50 of 40 nM.
Kinase Assay	In Vitro Bcr-Abl Kinase Assays: Bcr-Abl complexed to SHIP2 is immunoprecipitated from cell lysates of K562 cells maintained in log-phase culture conditions. Complexes are collected on protein A-Sepharose, and complexes are washed three times in lysis buffer and then washed twice in abl kinase buffer [50 mM Tris (pH 8.0), 10 mM MgCl2, 1 mM DTT, 2 mM p-nitrophenylphosphate, and 2 μM ATP; New England Biolabs Buffer and protocol]. Kinase assays are performed with 10 μM [γ-32P]ATP/sample for 15–60 min at 30°C in the presence or absence of the indicated concentrations of drug. The reaction is stopped by the addition of SDS-PAGE sample buffer and heated at 100°C for 10 min. Proteins are separated on 7.5% SDS-polyacrylamide gels, gels are dried under vacuum, and phosphorylation is visualized by autoradiography on X-ray film.
Cell Research	Cell growth is determined by two methods. For the [3H]thymidine assay, cells (104 cells/well) are cultured in 96-well, round-bottomed plates with diluted DMSO (control) or with varying concentrations of a specific compound that is resuspended in DMSO for 48 h at 37°C. [3H]Thymidine is added at a concentration of 1 μCi/well, and cells are incubated for an additional 18 h. Cells were harvested with the Unifilter system, scintillation fluid (25 μl/well) is added to each well, and [3H]thymidine incorporation is determined on a Packard Scintillation Counter. Data points for all assays are obtained in triplicate, and background incorporation from cell-free wells is determined and subtracted from all data points. For cell viability, control and drug-treated harvested cells are counted on a hemocytometer using the trypan blue dye exclusion method. (Only for Reference)

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 12 mg/mL (27.07 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2556 mL	11.2778 mL	22.5555 mL
5 mM	0.4511 mL	2.2556 mL	4.5111 mL
10 mM	0.2256 mL	1.1278 mL	2.2556 mL
50 mM	0.0451 mL	0.2256 mL	0.4511 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Wisniewski D, et al. Cancer Res. 2002, 62(15), 4244-4255.
Moasser MM, et al. Cancer Res. 1999, 59(24), 6145-6152.