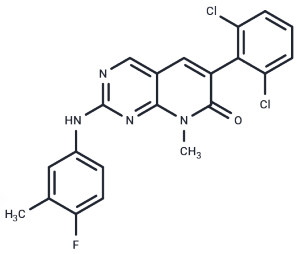
Data Sheet (Cat.No.T23128)

PD180970

Chemical Properties



CAS No. : 287204-45-9

Formula: C21H15Cl2FN4O

Molecular Weight: 429.27

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	PD180970 is an inhibitor of Bcr-Abl with IC50s of 5 nM, 0.8 nM and 50 nM for the autophosphorylation of p210Bcr-Abl, Src and Kit. PD180970 can be used in studies about chronic myelogenous leukemia.
Targets(IC50)	Apoptosis,Bcr-Abl,c-Kit,Src
In vitro	In K562 cells, PD180970 (0.5 μM) induces apoptosis and causes cell death. The IC50 values are 170, 80, and 80 nM for the tyrosine phosphorylation of p210Bcr-Abl, Gab2, and CrkL. PD180970 significantly inhibits the purified recombinant Abl tyrosine kinase activity with an IC50 of 2.2 nM[1]. In the human K562 CML cells, PD180970 inhibits the activity of Stat5 DNA-binding with an IC50 of 5 nM[2].
In vivo	In Male C57BL/6J mice injected with MPTP, intraperitonial injection of PD180970 (5mg/kg) decreased number of activated microglia on activation by MPTP and reduces the Iba1 expression intensity in activated microglia[1].

Solubility Information

Solubility	DMSO: 90 mg/mL (209.66 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 1 mg/mL (2.33 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3295 mL	11.6477 mL	23.2954 mL
5 mM	0.4659 mL	2.3295 mL	4.6591 mL
10 mM	0.233 mL	1.1648 mL	2.3295 mL
50 mM	0.0466 mL	0.233 mL	0.4659 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

J F Dorsey, et al. The pyrido[2,3-d]pyrimidine derivative PD180970 inhibits p210Bcr-Abl tyrosine kinase and induces apoptosis of K562 leukemic cells. Cancer Res. 2000 Jun 15;60(12):3127-31.
Mei Huang, et al. Inhibition of Bcr-Abl kinase activity by PD180970 blocks constitutive activation of Stat5 and growth of CML cells. Oncogene. 2002 Dec 12;21(57):8804-16.
Amie S Corbin, et al. Sensitivity of oncogenic KIT mutants to the kinase inhibitors MLN518 and PD180970. Blood. 2004 Dec 1;104(12):3754-7.
Suresh Sn, et al. Small molecule modulator of aggrephagy regulates neuroinflammation to curb pathogenesis of neurodegeneration. EBioMedicine. 2019 Dec;50:260-273.