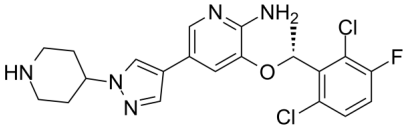
https://www.purduebio.com

Data Sheet

Product Information

Catalog Number	BP22533
Product Name	Crizotinib
Description	Crizotinib (PF-02341066) is an orally bioavailable, ATP-competitive ALK and c-Met inhibitor with IC50s of 20 and 8 nM, respectively. Crizotinib inhibits tyrosine phosphorylation of NPM-ALK and tyrosine phosphorylation of c-Met with IC50s of 24 and 11 nM in cell-based assays, respectively. Crizotinib is also a ROS1 inhibitor. Crizotinib has effective tumor growth inhibition.
In vitro	Crizotinib (PF-02341066) displays similar potency against c-Met phosphorylation in mIMCD3 mouse or MDCK canine epithelial cells with IC50 of 5 nM and 20 nM, respectivly. PF-2341066 shows improved or similar activity against NIH3T3 cells engineered to express c-Met ATP-binding site mutants V1092I or H1094R or the P-loop mutant M1250T with IC50 of 19 nM, 2 nM and 15 nM, respectively, compared with NIH3T3 cells expressing wild-type receptor with IC50 of 13 nM. In contrast, a marked shift in potency of PF-2341066 is observed against cells engineered to express c-Met activation loop mutants Y1230C and Y1235D with IC50 of 127 nM and 92 nM, respectively, compared with wild-type receptor. PF-2341066 also potently prevents the phosphorylation of c-Met in NCI-H69 and HOP92 cells, with IC50 of 13 nM and 16 nM, respectively, which express the endogenous c-Met variants R988C and T1010I, respectively.Crizotinib (PF-02341066) also potently inhibits NPM-ALK phosphorylation in Karpas299 or SU-DHL-1 ALCL cells with an IC50 of 24 nM. PF-2341066 potently prevents cell proliferation, which is associated with G(1)-S-phase cell cycle arrest and induction of apoptosis in ALK-positive ALCL cells with IC50 of 30 nM, but not ALK-negative lymphoma cells.

In vivo	Crizotinib (PF-02341066) reveals the ability to cause marked regression of large established tumors (> 600 mm3) in both the 50 mg/kg/day and 75 mg/kg/day treatment cohorts, with a 60% decrease in mean tumor volume over the 43-day administration schedule in the GTL-16 model. In an another study, PF-2341066 displays the ability to completely inhibits GTL-16 tumor growth for >3 months, with only 1 of 12 mice exhibiting a significant increase in tumor growth over the 3-month treatment schedule at 50 mg/kg/day. A significant dose-dependent reduction of CD31-positive endothelial cells is observed at 12.5 mg/kg/day, 25 mg/kg/day, and 50 mg/kg/day in GTL-16 tumors, indicating that inhibition of MVD shows a dose-dependent correlation to antitumor efficacy. PF-2341066 displays a significant dose-dependent reduction of human VEGFA and IL-8 plasma levels in both the GTL-16 and U87MG models. Marked inhibition of phosphorylated c-Met, Akt, Erk, PLCλ1, and STAT5 levels is observed in GTL-16 tumors following p.o. administration of PF-2341066. Treatment of c-MET-amplified GTL-16 xenografts with 50 mg/kg PF-2341066 elicits tumor regression that is associated with a slow reduction in 18F-FDG uptake and decreases expression of the glucose transporter 1, GLUT-1.
CAS No.	877399-52-5
Chemical Formula	C21H22Cl2FN5O
Molecular Weight	450.34
Solubility	DMSO: 33.33 mg/mL (74.01 mM, Need ultrasonic) H2O: < 0.1 mg/mL (ultrasonic) (insoluble)
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

Purdue Bioscience Inc.

750 50th St, Brooklyn, NY 11220, USA

https://www.purduebio.com

1-877.618.7311

info@purduebio.com

v2 Revision on 12/28/2022