Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

PF-562271

Catalog No: tcsc0039

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
717907-75-0

Formula:
$C_{21}H_{20}F_3N_7O_3S$

Pathway:
Protein Tyrosine Kinase/RTK;Protein Tyrosine Kinase/RTK

Target:
Pyk2;FAK

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 48 mg/mL (94.58 mM)

Observed Molecular Weight:
507.49

Product Description

PF-562271 is a potent ATP-competitive, reversible inhibitor of **FAK** and **Pyk2** kinase, with **IC_{50}** of 1.5 nM and 13 nM, respectively.

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IC50 & Target: IC50: 1.5 nM (FAK), 13 nM (Pyk2), 30 nM (CDK2), 47 nM (CDK3), 58 nM (CDK1), 97 nM (CDK7), 97 nM (Flt3)[1]

In Vitro: PF-562271 is shown to be a 30- to 120-nM inhibitor of CDK2/E, CDK5/p35, CDK1/B, and CDK3/E in recombinant enzyme assays, in cell-based assays evaluating the role of CDKs, a 48-hour exposure of 3.3 μM PF-562271 is required to alter cell cycle progression. PF-562271 is potent in an inducible cell-based assay measuring phospho-FAK with a IC_{50} of 5 nM[1]. PF-562271, a selective inhibitor of both FAK and proline-rich tyrosine kinase 2 (PYK2), a FAK-related family member, on cell growth and colony formation in Ewing sarcoma cell lines. Seven cell lines are treated for 5 days with PF-562271 across a range of concentrations using 2-fold serial dilutions. Treatment with PF-562271 impaires cell viability in all cell lines, with an average IC_{50} of 2.4 μM after 3 days of treatment. TC32 and A673 are the 2 most sensitive cell lines, with IC_{50} concentrations of 2.1 and 1.7 μM, respectively[2].

In Vivo: PF-562271 inhibits FAK phosphorylation in vivo in a dose-dependent fashion (calculated EC_{50} of 93 ng/mL, total) after p.o. administration to tumor-bearing mice[1]. Rats that receive PF-562271 demonstrate a decrease in tumor growth after 2 weeks of treatment with signs of bone healing as evidenced by the deposition of new bone (cortical and cancellous) at sites previously damaged by the tumor[3].