Taiclone®
Quality Guarantee

Web: www.taiclone.com
Tel: +886-2-2735-9682
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JNJ-7706621

Catalog No: tcsc0179

Available Sizes

Size: 2mg

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
443797-96-4

Formula:
$C_{15}H_{12}F_2N_6O_3S$

Pathway:
Cell Cycle/DNA Damage;Cell Cycle/DNA Damage;Epigenetics

Target:
CDK;Aurora Kinase;Aurora Kinase

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Observed Molecular Weight:
394.36

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Product Description

JNJ-7706621 is a potent **aurora kinase** inhibitor, and also inhibits **CDK1** and **CDK2**, with **IC_{50}**s of 9, 3, 11, and 15 nM for CDK1, CDK2, Aurora-A and Aurora-B, respectively.

IC50 & Target: IC50: 3 nM (CDK2), 9 nM (CDK1), 11 nM (Aurora-A), 15 nM (Aurora-B)[4]

In Vitro: JNJ-7706621 shows antiproliferative activity against various human tumor cells with IC_{50}s of 284, 254, and 447 nM for HeLa, HCT116, and A375, respectively[1]. JNJ-7706621 inhibits other centrosomal proteins such as TOG, Nek2, and TACC3 in early mitotic phase, but does not prevent localization of Aurora A to the spindle poles. Treatment of nocodazole-synchronized cells with JNJ-7706621 can override mitotic arrest by preventing spindle checkpoint signaling, resulting in failure of chromosome alignment and segregation[2]. JNJ-7706621 suspensions inhibits cell viability of HeLa cells with IC_{50}s of 2.1 and 0.9 μg/mL at 24 and 48 h. The IC_{50} of the JNJ-7706621-loaded nanoparticles are 35 and 2.7 μg/mL and the IC_{50} of the JNJ-7706621-loaded micelles are 6.3 and 1.6 μg/mL [3]. JNJ-7706621 shows inhibition of Aurora-A and Aurora-B but has no activity at the highest concentration tested on the Plk1 or Wee1 serine/threonine kinases. JNJ-7706621 also shows potent growth inhibition in vitro on all human cancer cell types with IC_{50} values ranging from 112 to 514 nM[4].

In Vivo: JNJ-7706621 (100 mg/kg, i.p.) exhibits 95% tumor growth inhibition in A375 (human melanoma) tumor xenograft model[1]. JNJ-7706621-loaded micelles inhibit tumor growth, and delay the tumor growth more efficiently than the control JNJ-7706621 suspension[3]. JNJ-7706621 (100 and 125 mg/kg) is efficacious in a human tumor xenograft model under intermittent dosing regimens[4].