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

AZD 6482

Catalog No: tcsc0086

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
1173900-33-8

Formula:
$C_{22}H_{24}N_4O_4$

Pathway:
PI3K/Akt/mTOR;Autophagy

Target:
PI3K;Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 100 mg/mL (244.83 mM)

Alternative Names:
KIN 193

Observed Molecular Weight:
408.45

Product Description

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AZD 6482 is a potent and selective **p110β** inhibitor with **IC_{50}** of 0.69 nM.

IC50 & Target: IC50: 0.69 nM (p110β)[1]

In Vitro: An in vitrokinase assay demonstrates that AZD 6482 (KIN-193) is highly potent in the inhibition of p110β's kinase activity (IC_{50} of 0.69 nM) and has 200, 20, and 70-fold selectivity over p110α, p110δ, and p110γ isoforms, respectively. AZD 6482 also exhibits selectivity of ~80 fold over PI3K-C2β and DNA-PK and more than 1,000-fold over other phosphatidylinositol-3 kinase–related kinases (PIKKs). An inhibitor-kinase interaction profiling of AZD 6482 against a panel of 433 kinases using the KinomeScan approach demonstrates that AZD 6482 is highly selective in its interaction with PI3Ks. To determine whether AZD 6482 selectively targets PTEN-deficient tumors, the effect of AZD 6482 is tested on cell proliferation on a large panel of 422 cancer cell lines using high-throughput tumor cell line profiling. 35% of cell lines with PTEN mutations (20 out of 57) and 16% of cell lines with wild-type PTEN (58 out of 365) are sensitive to AZD 6482 with a threshold of EC_{50}[1].

In Vivo: To determine the pharmacodynamics of AZD 6482 (KIN-193) in tumors in vivo, rat fibroblast (Rat1) cells are engineered to express both p53DD, a dominant negative mutant of p53, and a constitutively activated myr-p110β (Rat1-CA-p110β) to enable these cells to form xenograft tumors in mice. For comparison, an isogenic Rat1 cell line expressing p53DD and myr-p110α (Rat1-CA-p110α) is also generated. Rat1-CA-p110α and Rat1-CA-p110β cells are introduced subcutaneously into the contralateral flanks of athymic mice such that tumors driven by activated p110α or p110β would be exposed to identical conditions and that concern about animal-to-animal variability could be eliminated. When tumors reach a volume of ~500 mm^3, the tumor-bearing mice receives a single IP injection of AZD 6482 (10 mg/kg). The plasma concentration of AZD 6482 is highest at 1 hour post-injection and declined to undetectable levels by 4h. Concentrations of AZD 6482 in both the CA-p110α- and CA-p110β-driven tumors parallel the plasma concentrations. Analyses of tumor lysates harvested at various time points after AZD 6482 injection reveal that the phosphorylation of AKT is significantly reduced at 1hour after AZD 6482 injection in Rat1-CA-p110β tumors, but remain unchanged in Rat1-CAp110α tumors[1].