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

Ro3280

Catalog No: tcsc1673

Available Sizes

Size: 2mg

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
1062243-51-9

Formula:
$C_{27}H_{35}F_2N_7O_3$

Pathway:
Cell Cycle/DNA Damage

Target:
Polo-like Kinase (PLK)

Purity / Grade:
>98%

Solubility:
DMSO : 6.4 mg/mL (11.77 mM; Need ultrasonic and warming)

Observed Molecular Weight:
543.61

Product Description

Ro3280 is a potent, highly selective inhibitor of **PLK1** with an **IC_{50}** and a **K_d** of 3 nM and 0.09 nM, respectively, and nearly has no

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effect on PLK2 and PLK3.

IC50 & Target: IC50: 3 nM (PLK1)[1][2]

Kd: 0.09 nM (PLK1), 51 nM (TTK), 84 nM (PTK2)[2]

In Vitro: Ro3280 (RO3280) inhibits PLK1 activity in NB4 and K562 cells, with an IC_{50}s of 13.45 nM and 301 nM, respectively. RO3280 shows inhibitory activities against the growth of six leukemia cells, with IC_{50}s of 186 nM, 175 nM, 74 nM, 797 nM, 120 nM and 162 nM for U937, HL60, NB4, K562, MV4-11 and CCRF cell lines, respectively. RO3280 also suppresses the growth of primary ALL and AML cells, with IC_{50}s of 35.49-110.76 nM, and 52.80-147.50 nM, respectively. RO3280 (50 or 100 nM) induces apoptosis and cell cycle disorder in acute leukemia cells[1]. Ro3280 shows potent activity in H82, H69, A549 lung cancer cell lines with EC_{50}s of 6 nM, 7 nM and 82 nM. Ro3280 also inhibits several other cancer cell lines, with low concentration[2]. RO3280 is cytotoxic to 5637 and T24 human bladder cancer cells, with IC_{50}s of appr 100 nM.

In Vivo: Ro3280 (RO3280, 40 mg/kg, i.v.) inhibits 72% tumor growth in a mouse xenograft model implanted with HT-29 colorectal cancer cells, and when dosed more frequently, RO3280 completely suppresses the tumor growth[2]. RO3280 (30 mg/kg, once every 5 days, i.p.) shows significant anti-bladder cancer activities in a nude mouse model[3].