Web: www.taiclone.com
Tel: +886-2-2735-9682
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PF-5274857

Catalog No: tcsc1206

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
1373615-35-0

Formula:
$C_{20}H_{25}ClN_4O_3S$

Pathway:
Stem Cell/Wnt

Target:
Smo

Purity / Grade:
>98%

Solubility:
DMSO : 125 mg/mL (286.07 mM; Need ultrasonic)

Observed Molecular Weight:
436.96

Product Description

PF-5274857 is a potent and selective Smoothened (Smo) antagonist, inhibits Hedgehog (Hh) signaling with IC50 and Ki of 5.8 nM and

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4.6 nM, respectively, and can penetrate the blood–brain barrier.

IC50 value: 5.8 nM

Target: Smoothened

in vitro: PF-5274857 completely inhibits Shh-induced Hh pathway activity with IC50 of 2.7 nM measured by the transcriptional activity of Smo downstream gene Gli1 in MEF cells. The μ-opioid receptor is weakly inhibited by PF-5274857 with a dissociation constant of 36 μM subsequently determined in a functional assay [1].

in vivo: PF-5274857 shows significant dose-dependent tumor growth inhibition (TGI) and induces tumor regression at high doses(>10 mg/kg)., PF-5274857 downregulates Gli1, Gli2, Ptch1, and Ptch2 gene expression levels to various degrees with maximal effects being achieved between 6 and 12 hours post-dose (Gli1 is the most sensitive gene), whereas PF-5274857 has little effect on Smo levels. In skin tissue, downregulation of Gli1 and Gli2 is also observed with a similar time course by PF-5274857. The model-derived drug concentration for half maximal inhibition of the tumor Gli1 mRNA production rate (IC50) by PF-5274857 is determined to be 8.9 nM in the Ptch+/ p53+/ medulloblastoma allograft mice, which mathematically corresponds to tumor regression of 119% TGI after 6 days of plasma exposure at this concentration. In the Ptch+/ p53 / medulloblastoma allograft mice, the IC50 value is estimated to be 3.5 nM, consistent with the Ptch+/ p53+/ results. PF-5274857 is also able to cross the blood–brain barrier in rats within 4 hours post-dose [1].