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

DAPT

Catalog No: tcsc0264

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
208255-80-5

Formula:
$C_{23}H_{26}F_2N_2O_4$

Pathway:
Stem Cell/Wnt;Neuronal Signaling;Autophagy

Target:
γ-secretase;γ-secretase;Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : 62.5 mg/mL (144.52 mM; Need ultrasonic); H2O :

Alternative Names:
GSI-IX

Observed Molecular Weight:
432.46

Product Description

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DAPT is a **γ-secretase** inhibitor with **IC_{50}**s of 115 and 200 nM for total Aβ and Aβ42, respectively.

IC50 & Target: IC50: 115 nM (Aβ), 200 nM (Aβ42)[5]

In Vitro: DAPT inhibits Aβ production over 90%, effects only a modest reduction in APPβ in the culture media. Although APPβ is reduced by about 30% by DAPT treatment, this effect is not concentration-dependent and is reversed by the removal of DAPT[1]. CNE-2 cells are treated with increasing concentrations of DAPT (0, 25, 50 and 75 μM), and the γ-secretase-generated Notch 1 fragment Val1744-NICD is decreased after 48 h in a dose-dependent manner (P[2].

In Vivo: DAPT is administered to PDAPP mice (100 mg/kg s.c.) and the levels of DAPT and Aβ are examined in the brain cortex. Peak DAPT levels of 490 ng/g are achieved in the brain 3 h after treatment, and levels greater than 100 ng/g (~200 nM) are sustained throughout the first 18 h. These brain concentrations of DAPT are in excess of its IC_{50} for lowering Aβ in neuronal cultures (115 nM), and results in a robust and sustains pharmacodynamic effect[1]. DAPT protects brain against cerebral ischemia by down-regulating the expression of Notch 1 and Nuclear factor kappa B in rats. Western blot analyses also show a significant decrease of Notch 1 and NF-κB expression in DAPT (0.03 mg/kg) group (P[3].