Revision 1

Store at -20C

#15020

DAPT

5 mg

Cell Signaling TECHNOLOGY®

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Background

DAPT is a potent γ-secretase inhibitor. Research studies have demonstrated that DAPT inhibits production of total β-amyloid peptide (Aβ) and Aβ42 in human primary neuronal cultures with an IC_{50} of 115 nM and 200 nM, respectively (1). DAPT-induced inhibition of Notch1 signaling prevents cleavage formation of the Notch1 intracellular domain (NICD), resulting in down regulation of target gene transcription (2). DAPT treatment has been shown to induce apoptosis in Jurkat (2) and lung squamous cell carcinoma (3) cell lines.

Molecular Formula

$C_{23}H_{26}F_2N_2O_4$

Molecular Weight

432.5 g/mol

Purity

>95%

CAS

208255-80-5

Solubility

Soluble in DMSO at 15mg/ml and EtOH at 1mg/ml.

Storage

Store lyophilized or in solution at -20ºC, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use

DAPT is supplied as a lyophilized powder. For a 25 mM stock, reconstitute 5 mg in 462.43 µl DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but are typically used at 10-50 µM for 12-48 hr, respectively.

Background References

1. Dovey, H.F. et al. (2001) *J Neurochem* 76, 173-81.
2. Luo, X. et al. (2013) *Cancer Cell Int* 13, 34.
3. Cao, H. et al. (2012) *APMIS* 120, 441-50.

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Limited Uses

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