bio-techne
TOCRIS

Print Date: Oct 24th 2024

Certificate of Analysis

www.tocris.com

Product Name: **DAPT** **Catalog No.: 2634** **Batch No.: 11**

CAS Number: 208255-80-5

IUPAC Name: (2*S*)-*N*-[(3,5-Difluorophenyl)acetyl]-L-alanyl-2-phenyl]glycine 1,1-dimethylethyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{23}H_{26}F_2N_2O_4$.

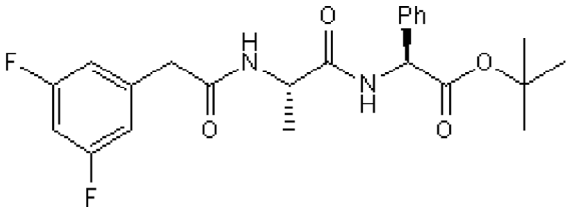
Batch Molecular Weight: 432.46

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity

Chiral HPLC: Shows 99.3% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.88	6.06	6.48
Found	63.87	6.1	6.47

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Description:

DAPT is a γ-secretase inhibitor. DAPT reduces Aβ40 and Aβ42 levels in human primary neuronal cultures (IC_{50} values are 115 and 200 nM for total Aβ and Aβ42 respectively) and in brain extract, cerebrospinal fluid and plasma in vivo. DAPT has no effect on APPα and APPβ levels. DAPT blocks Notch signaling in hybrid human-mouse fetal thymus organ culture (FTOC) and causes ESCs to commit to neuronal differentiation. DAPT can be used in a small molecule cocktail to derive cortical neurons from hPSCs and to maintain hepatocytes in culture. DAPT also promotes the formation of cone photoreceptors in retinal organo... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

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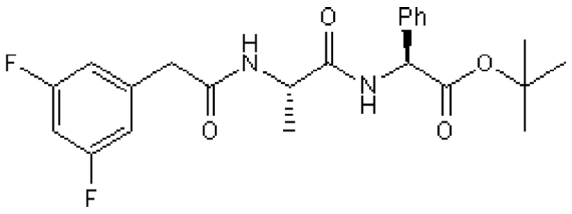
Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Zerti *et al* (2020) Developing a simple method to enhance the generation of cone and rod photoreceptors in pluripotent stem cell-derived retinal organoids. Stem Cells ***38*** 45. PMID: 31670434.

Xiang *et al* (2019) Long-term functional maintenance of primary human hepatocytes *in vitro*. Science ***364*** 399. PMID: 31023926.

Qi *et al* (2017) Combined small-molecule inhibition accelerates the derivation of functional cortical neurons from human pluripotent stem cells. Nat.Biotechnol. ***35*** 153. PMID: 28112759.