

# Certificate of Analysis

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**Product Name:** DAPT

**Catalog No.:** 2634

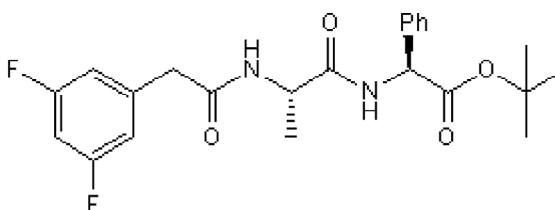
**Batch No.:** 11

**CAS Number:** 208255-80-5

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

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>23</sub>H<sub>26</sub>F<sub>2</sub>N<sub>2</sub>O<sub>4</sub>.  
**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  
**<sup>1</sup>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

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

DAPT is a  $\gamma$ -secretase inhibitor. DAPT reduces A $\beta$ 40 and A $\beta$ 42 levels in human primary neuronal cultures (IC<sub>50</sub> values are 115 and 200 nM for total A $\beta$  and A $\beta$ 42 respectively) and in brain extract, cerebrospinal fluid and plasma in vivo. DAPT has no effect on APP $\alpha$  and APP $\beta$  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 and dopaminergic neurons from hPSCs (see our protocols below). Used in protocols to generate myoblasts from human human iPSCs. DAPT... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

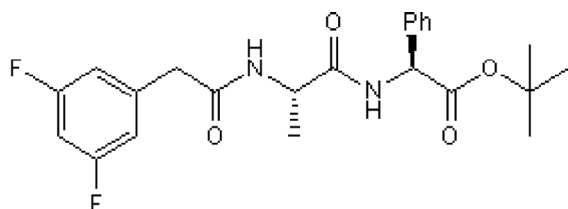
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Batch Molecular Weight: 432.46

Physical Appearance: White solid

**Minimum Purity:** ≥99%

**Batch Molecular Structure:**



**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.

**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.

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