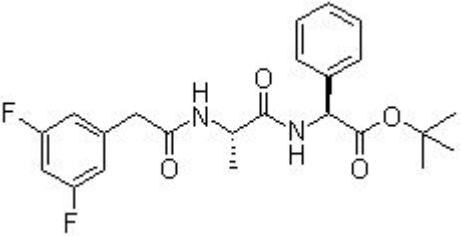


## Product Introduction

### DAPT (GSI-IX)

DAPT (GSI-IX) is a novel  $\gamma$ -secretase inhibitor, which inhibits A $\beta$  production with IC<sub>50</sub> of 20 nM in HEK 293 cells.

#### Technical Data:

<b>Molecular Weight (MW):</b>	432.46	
<b>Formula:</b>	C <sub>23</sub> H <sub>26</sub> F <sub>2</sub> N <sub>2</sub> O <sub>4</sub>	
<b>Solubility (25°C)</b>	DMSO 86 mg/mL	
<b>* &lt;1 mg/ml means slightly soluble or insoluble:</b>	Water <1 mg/mL	
	Ethanol 50 mg/mL	
<b>Purity:</b>	>98%	
<b>Storage:</b>	3 years -20°C Powder 6 months -80°C in DMSO	
<b>CAS No.:</b>	208255-80-5	

#### Biological Activity

In human primary neuronal cultures, DAPT also shows inhibitory effects on A $\beta$  production with IC<sub>50</sub> of 115 nM and 200 nM respectively for A $\beta$  total and A $\beta$ <sub>42</sub>, which is 5-10-fold lower than is observed in HEK 293 cells. <sup>[1]</sup> A recent study shows that DAPT inhibits the proliferation of SK-MES-1 cells in a concentration-dependent manner with IC<sub>50</sub> of 11.3  $\mu$ M. In addition, DAPT also induces caspase-dependent and caspase-independent apoptosis in lung squamous cell carcinoma cells by inhibiting Notch receptor signaling pathway. <sup>[2]</sup>

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DAPT administration (100mg/kg) leads to a robust and sustained pharmacodynamic effect in PDAPP mice that DAPT levels in the brain exceeds 100 ng/g within 1 hour and persists up to 18 hours after administration, with peak levels of 490 ng/g observed after 3 hour. And during the period, DAPT (100 mg/kg) also reduces the cortical total A $\beta$  and A $\beta$ 42 in a dose-dependent manner with a 50% reduction. [1] In rat cerebral cortexes, DAPT (40 mg/kg) suppresses the LPS-induced activity of  $\gamma$ -secretase and increases the cell apoptosis with the prolonged neuroinflammation. [3]

## References

- [1] Dovey HF, et al. J Neurochem. 2001, 76(1), 173-181.
- [2] Cao H, et al. APMIS. 2012, 120(6), 441-450.
- [3] Nasoohi S, et al. Neuroscience. 2012, 210, 99-109.



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