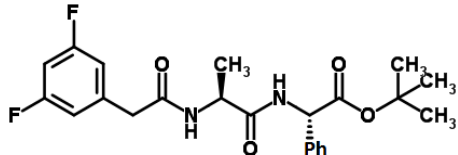




Product Specification Sheet

Product Name	Stemolecule™ DAPT
Description	Stemolecule DAPT, a cell-permeable dipeptide, inhibits γ -secretase and indirectly inhibits Notch, a γ -secretase substrate ¹ . Since the Notch pathway is involved in the development of both the nervous system and pancreas, DAPT may be useful in modulating Notch activity in embryonic stem cell differentiation studies ² . DAPT has been shown to dose-dependently decrease amyloid- β (A- β) levels via inhibition of γ -secretase in both plasma and cerebral spinal fluid ³ . Since amyloid- β (A- β) containing senile plaques are characteristic in Alzheimer's disease, DAPT may be useful in studies evaluating potential treatments for that disease.
Catalog Number	04-0041
Size	5 mg
Alternate Name	N-[(3,5-Difluorophenyl)acetyl]-L-alanyl-2-phenylglycine-1,1-dimethylethyl ester
Chemical Formula	C ₂₃ H ₂₆ F ₂ N ₂ O ₄
Structure	
Molecular Weight	432.46
CAS Number	208255-80-5
Purity	Greater than 99% by HPLC analysis
Formulation	White powder
Solubility	For a 10 mM concentrated stock solution of DAPT, reconstitute the compound by adding 1.16 ml of DMSO to the entire contents of the vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes. For cell culture, the media should be prewarmed prior to adding the reconstituted compound. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%. This molecule is soluble in DMSO at 100 mM.
Storage and Stability	Store powder at 4°C protected from light. Following reconstitution, store aliquots at -20°C. Stock solutions are stable for 6 months when stored as directed.
Quality Control	The purity of DAPT was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. Cellular toxicity of DAPT was tested on mouse embryonic stem cells.

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Product Specification Sheet

References

1. Dovey, H.F., John, V., Anderson, J.P., Chen, L.Z., de Saint Andrieu, P., Fang, L.Y., Freedman, S.B., Folmer, B., Goldbach, E., Holsztynska, E.J., Hu, K.L., Johnson-Wood, K.L., Kennedy, S.L., Kholodenko, D., Knops, J.E., Latimer, L.H., Lee, M., Liao, Z., Lieberbug, I.M., Motter, R.N., Mutter, L.C., Nietz, J., Quinn, K.P., Sacchi, K.L., Seubert, P.A., Shopp, G.M., Thorsett, E.D., Tung, J.S., Wu, J., Yang, S., Yin, C.T., Schenk, D.B., May, P.C., Altstiel, L.D., Bender, M.H., Boggs, L.N., Britton, T.C., Clemens, J.C., Czilli, D.L., Dieckman-McGinty, D.K., Droste, J.J., Fuson, K.S., Gitter, B.D., Hyslop, P.A., Johnstone, E.M., Li, W.Y., Little, S.P., Maybry, T.E., Miller, F.D., and Audia, J.E. (2001) Functional gamma-secretase inhibitors reduce beta-amyloid peptide levels in brain. *J Neurochem* 76: 173-181.
2. Crawford, T., and Roelink, H. (2007) The notch response inhibitor DAPT enhances neuronal differentiation in embryonic stem cell-derived embryoid bodies independently of Sonic Hedgehog Signaling. *Dev Dyn*. 236: 886-892.
3. Lanz, T.A., Hosley, J.D., Adams, W.J., and Merchant, K.M. (2004) Studies of of A β pharmacodynamics in the brain, cererbrospinal fluid, and plasma in young (plaque-free) Tg2576 mice using the γ -secretase inhibitor N2-[(2S)-2-(3,5-difluorophenyl)-2-hydroxyethanoyl]-N1-[(7S)-5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl]-L-alaninamide (LY-411575). *J Pharmacol Exp Ther*. 309: 49-55.

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