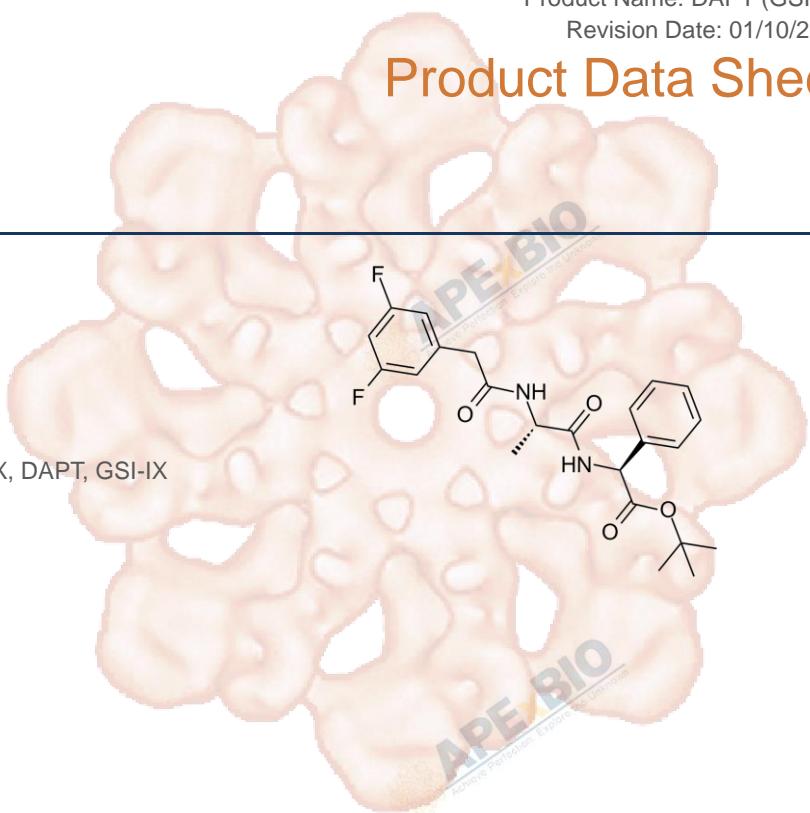


Product Data Sheet

DAPT (GSI-IX)

Cat. No.:	A8200
CAS No.:	208255-80-5
Formula:	C23H26F2N2O4
M.Wt:	432.46
Synonyms:	gamma-Secretase Inhibitor IX, DAPT, GSI-IX
Target:	Neuroscience
Pathway:	Amyloid β
Storage:	Store at -20°C



Solvent & Solubility

≥ 21.62 mg/mL in DMSO; insoluble in H₂O; ≥ 16.36 mg/mL in EtOH with ultrasonic

In Vitro	Preparing Stock Solutions	Concentration	Mass		
			Solvent	1mg	5mg
			1 mM	2.3124 mL	11.5618 mL
		5 mM		0.4625 mL	2.3124 mL
		10 mM		0.2312 mL	1.1562 mL
					2.3124 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

In Vitro	Shortsummary	γ -secretase inhibitor,potent and specific
	IC ₅₀ & Target	20 nM (A β)
	Cell Viability Assay	
	Cell Line:	SHG -44 human glioma cell line
	Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
	Reacting conditions:	5d; 1.0 μ M

	Applications:	Cell viability in each group was detected by MTT. Compared with those in group A (control), proliferation of SHG -44 cells in group B (0.5 μ M), C (1 μ M), D (5 μ M) and E (10 μ M) were inhibited by DAPT. For group B and A, the results were significantly different ($P < 0.05$). It indicated that DAPT is a concentration-dependent inhibitor that may obviously inhibit SHG-44 cells proliferation. As concentration of DAPT higher than 1.0 μ mol/L showed no more obvious disparities in cell inhibition, concentration of 1.0 μ mol/L was our priority.
Animal experiment		
	Animal models:	Male Balb/C mice
	Dosage form:	10 mg/kg/day; subcutaneously injected
In Vivo	Applications:	CT26 colon adenocarcinoma cells (5×10^5 cells) in 500 μ L of Phosphate buffer solution (PBS) were inoculated subcutaneously into the dorsum of all mice. Administration of DAPT significantly reduced serum sVEGFR1, while could not change serum VEGF concentration in control mice. Immunohistochemical study of the tumors showed that CD31 positive cells were reduced after DAPT administration (280.6 ± 81 vs. 386 ± 59.9 CD31 positive cells/mm ²), although it was not statistically significant.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Speer JE, Gunasekara DB, et al. "Molecular transport through primary human small intestinal monolayers by culture on a collagen scaffold with a gradient of chemical cross-linking." *J Biol Eng.* 2019 Apr 27;13:36. PMID:31061676
2. Azimi M, Brown NL. "Jagged1 protein processing in the developing mammalian lens." *Biol Open.* 2019 Mar 26;8(3). pii: bio041095. PMID:30890522
3. Wu F, Wu D, et al. "Generation of hepato-biliary organoids from human induced pluripotent stem cells." *J Hepatol.* 2019 Jan 7. pii: S0168-8278(19)30002-9. PMID:30630011
4. MXinwei Feng, Junfeng Lu, et al. "Mycobacterium smegmatis Induces Neurite Outgrowth and Differentiation in an Autophagy-Independent Manner in PC12 and C17.2 Cells." *Front. Cell. Infect. Microbiol.*, 19 June 2018.
5. Tang J, Zhou H, et al. "Dual-Mode Imaging-Guided Synergistic Chemo- and Magnetohyperthermia Therapy in a Versatile Nanoplatform To Eliminate Cancer Stem Cells." *ACS Appl Mater Interfaces.* 2017 Jul 19;9(28):23497-23507. PMID:28661121

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References

- [1] Liu X, Xu Q R, Xie W F, et al. DAPT suppresses the proliferation of human glioma cell line SHG-44[J]. Asian Pacific journal of tropical medicine, 2014, 7(7): 552-556.

[2] Kalantari E, Saeidi H, Kia N S, et al. Effect of DAPT, a gamma secretase inhibitor, on tumor angiogenesis in control mice[J]. Advanced biomedical research, 2013, 2.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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