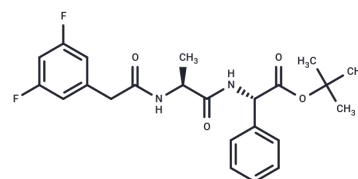


DAPT(γ 分泌酶抑制剂)

货号: RPM0020

◆ 产品信息

中文名称/Chinese Name:	DAPT(γ 分泌酶抑制剂)
别称/Synonyms:	LY-374973, GSI-IX
CAS 号/CAS NO.:	208255-80-5
化学式/Formula:	C ₂₃ H ₂₆ F ₂ N ₂ O ₄
分子量/M.Wt:	432.46
外观/Appearance:	固体
保存条件/Storage:	Powder: -20°C, 3 年 Insolvent: -80°C, 1 年



◆ 溶解信息

溶解度/Solubility:	DMSO: 43.2 mg/mL (100 mM) H ₂ O: Insoluble (<1mg/ml 是指产品微溶或不溶)
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溶液配制参考/Preparing Stock Solutions:

	1 mg	5 mg	10 mg
1 mM	2.3124 mL	11.5618 mL	23.1235 mL
5 mM	0.4625 mL	2.3124 mL	4.6247 mL
10 mM	0.2312 mL	1.1562 mL	2.3124 mL
50 mM	0.0462 mL	0.2312 mL	0.4625 mL

◆ 生物活性

产品描述/Description	DAPT(γ 分泌酶抑制剂) is a γ -secretase inhibitor that inhibits total A β and A β 42 (IC ₅₀ =115/200 nM) and is orally active. DAPT is also a Notch inhibitor. DAPT induces cell differentiation, autophagy and apoptosis.
靶点活性/Targets (IC ₅₀)	Apoptosis, Beta Amyloid, Gamma-secretase, Autophagy
体外活性/In vitro	1. 肿瘤细胞 GH3 和原代 GHoma 用 DAPT (20-100 nM)处理 24 h, 使用 Transwell 方法检测细胞迁移情况。DAPT 抑制 GH3 细胞和原代 GHoma 细胞迁移。 ^[2]
体内活性/In vivo	1. 为检测体内抗肿瘤活性, 将 DAPT (1-5 mg/kg) 腹腔注射给携带大鼠垂体肿瘤 GH3 的 athymic immune-deficient nude 小鼠模型, 每天一天, 持续十五天。DAPT 治疗显著抑制了肿瘤生长。DAPT 治疗的肿瘤中 Notch2 和 DLL3 的表达下调, DLL4 和 VEGF 表达没有差异。 ^[2]

	2. 为研究对顺铂肾损伤的作用，将 DAPT (15 mg/kg in 20%Captisol) 腹腔注射给 cisplatin 引起肾损伤的 C57BL/6J 小鼠模型，每天一次，持续五天。DAPT 减轻了顺铂诱导的肾小管损伤和肾小球滤过率的降低。Notch 信号通路可能是缓解顺铂化疗相关肾脏并发症的潜在治疗靶点。^[3]
细胞实验/Cell Research	1 . Cells were plated in 96-well plates and allowed to adhere overnight in Dulbecco's modified Eagle medium (DMEM) supplemented with 10% heat-inactivated fetal bovine serum. For compound screening and dose ± response testing, compounds were diluted from stock solutions in DMSO to yield a final concentration equal to 0.1% DMSO in media. Cells were pre-treated for 2 h with compounds, media were aspirated off and fresh compound solutions applied. After an additional 2-h treatment period, conditioned media were drawn off and analyzed by a sandwich ELISA (266±3D6) specific for total Ab. Reduction of Ab production was measured relative to control cells treated with 0.1% DMSO and expressed as percentage inhibition. Data from at least six doses in duplicate were fitted to a four-parameter logistical model using XLfit software in order to determine potency ^[1].
动物实验/Animal Research	1 . Each treatment group (n=10) consisted of equal numbers of age-matched male and female animals that were fasted overnight prior to treatment. Both treatment and control groups were dosed at a volume of 10 mL/kg with compound formulated in corn oil, 5% (v/v) ethanol or vehicle alone. Tissues were processed and all Ab and APP measurements were made. The cortex from one hemisphere was homogenized, extracted with 5 M guanidine, 50 mM Tris ± pH 8.0, centrifuged, and the supernatant was used for Ab measurements. Cortex from the other hemisphere was snap frozen for analysis of compound levels. Ab levels were expressed as ng/g of wet tissue weight, and percentage reductions were calculated relative to the mean Ab level of tissue from vehicle-treated control animals. Data were analyzed with Mann± Whitney non-parametric statistics to assess significance [1]. ^[1]

◆ 参考文献

- [1] Jiang LY, et al. γ-Secretase Inhibitor, DAPT Inhibits Self-renewal and Stemness Maintenance of Ovarian Cancer Stem-like Cells In Vitro. Chin J Cancer Res. 2011 Jun;23(2):140-6.
- [2] Feng J, et al. DAPT, a γ-Secretase Inhibitor, Suppresses Tumorigenesis, and Progression of Growth Hormone-Producing Adenomas by Targeting Notch Signaling. Front Oncol. 2019 Aug 27;9:809.
- [3] Soni H, et al. γ-secretase inhibitor DAPT mitigates cisplatin-induced acute kidney injury by suppressing Notch1 signaling. J Cell Mol Med. 2019 Jan;23(1):260-270.

◆ 注意事项

- 请在收到本产品后立即按照说明书中推荐的条件保存，使用前进行离心，使粉末充分沉降至管底。
- 请根据实验目的及本产品的溶解性，选择相应的溶剂配制成高浓度母液后使用，最佳工作浓度请参考相关文献通过实验摸索优化，本说明书中的数据来源于公开文献，仅供参考。
- 本产品仅供科研使用，不可用于诊断或治疗领域。
- 为了您的安全和健康，请穿实验服并戴一次性手套操作。