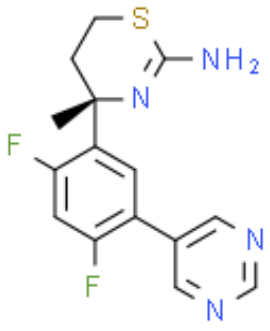
Product Data Sheet

Cas No.:	1194044-20-6	Cat. No:	PC15651
Product Name:	LY2811376		
Product synonym:	(4S)-4-[2,4-二氟-5-(5-嘧啶)苯基]-5,6-二氢-4-甲基-4H-1,3-噻嗪-2-胺;(4S)-4-[2,4-二氟-5-(5-嘧啶基)苯基]-5,6-二氢-4-甲基-4H-1,3-噻嗪-2-胺;LY2811376 抑制剂		
Chemical name:	LY2811376		
MF:	C15H14N4F2S	FW:	320.36026
Purity:	≥98%	Batch No.:	-
Storage:			
Structural formula:			
λmax：	-	Formulation：	-
Solubility :			
SMILES :	FC1=C(C2=CN=CN=C2)C=C([C@]3(C)CCSC(N3)=N)C(F)=C1		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

BACE1的非肽类抑制剂，LY2811376 是一种可口服的，非肽段的 β-secretase (BACE1) 抑制剂，IC50 值为 239 nM-249 nM，能够降低 Aβ 蛋白的分泌，EC50 值为 300 nM。

生物活性	LY2811376 is the first orally available non-peptidic **β-secretase (BACE1)** inhibitor with **IC_{50}** of 239 nM-249 nM, that acts to decrease Aβ secretion with **EC_{50}** of 300 nM, and demonstrates to have 10-fold selectivity towards BACE1 over BACE2, and more than 50-fold inhibition over other aspartic proteases including cathepsin D, pepsin, or renin.
IC50 & Target[1][2]	IC50: 239-249 nM (BACE1)

体外研究(In Vitro)	In an APP-overexpressing human embryonic kidney cell line, LY2811376 treatment yields a concentration-dependent decrease in Aβ secretion with a half-maximal effective concentration (EC_{50}) of appr 300 nM. LY2811376 treatment of primary neuronal cultures of PDAPP transgenic mouse produces a concentration-dependent decrease in Aβ secretion with an EC_{50} of appr 100 nM. LY2811376 has good ADME properties (BACE1 IC_{50}=240?nM, cellular potency IC_{50}=300?nM) and selectivity (BACE2 and cathepsin?D selectivity: appr 10- and 65-fold, respectively). LY2811376 reduces the Aβ40 levels in cortex and plasma without change of health and weight in a dose-dependent manner. **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.**
体内研究(In Vivo)	LY2811376 (10, 30, and 100 mg/kg, p.o.) results in dose-dependent, significant reductions in Aβ as well as sAPPβ and C99, the proximal cleavage products of APP proteolysis by BACE1. LY2811376 produces dose-dependent decreases in all APP-related PD markers of BACE1 inhibition in PDAPP mice. Low (30 mg) and high (90 mg) doses of LY2811376 investigated in the CSF sampling study are based on PK and plasma Aβ PD observed in the SAD study. LY2811376 (30 mg/kg, p.o.) can lead to a 60% decrease in the soluble Aβs in mouse cortex. LY2811376 (100 mg/kg, p.o.) decreases the spine density and formation in mice. LY2811376 (100 mg/kg every 12 hours over 16 days) causes a reduction in the frequency of sEPSC and mEPSC, whereas the effects of LY2811376 on the amplitude of sEPSC fails to reach significance. **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.**
包装储存	Powder **-20°C** 3 years **4°C** 2 years In solvent **-80°C** 6 months **-20°C** 1 month

体外研究:

DMSO : ≥ 31 mg/mL (96.77 mM)

* "≥" means soluble, but saturation unknown.

配制储备溶液	质量 溶剂体积 浓度	1 mg	5 mg	10 mg
	1 mM	3.1215 mL	15.6074 mL	31.2149 mL
	5 mM	0.6243 mL	3.1215 mL	6.2430 mL
	10 mM	0.3121 mL	1.5607 mL	3.1215 mL

* 产品不同，其溶解度不同。建议根据产品选择合适的溶剂配制储备溶液；配成溶液后，**建议分装保存，避免反复冻融造成的产品失效**。
  储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，建议在 6 个月内使用，-20°C 储存时，建议在 1 个月内使用。

体内研究:

建议根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都建议先按照 **体外研究** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，**澄清的储备液可以根据储存条件，适当保存**；体内实验的工作液，**建议您现用现配，当天使用**； 以下溶剂前显示的百分比是指**该溶剂在您配制终溶液中的体积占比**；如在配制过程中出现沉淀、析出现象，可以通过**加热和/或超声的**

溶解度数据	**方式助溶** 1. 建议依照次序添加每种溶剂： 10% DMSO 40% PEG300 5% Tween-80 45% saline Solubility: ≥ 2.5 mg/mL (7.80 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (7.80 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入50 μL Tween-80，混合均匀；然后继续加入 450 μL生理盐水定容至 1 mL。 将 0.9 g 氯化钠，完全溶解于 100 mL ddH?O 中，得到澄清透明的生理盐水溶液 2. 建议依照次序添加每种溶剂： 10% DMSO 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.80 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (7.80 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。 将 2 g 磺丁基醚 β-环糊精加入 5 mL 生理盐水中，再用生理盐水定容至 10 mL，完全溶解，澄清透明 3. 建议依照次序添加每种溶剂： 10% DMSO 90% corn oil Solubility: ≥ 2.5 mg/mL (7.80 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (7.80 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL玉米油中，混合均匀。 *