产品名称：阿尼芬净
产品别名：**Anidulafungin**

生物活性：

Description	Anidulafungin is a new semisynthetic echinocandin with antifungal potency.
IC_{50} & Target	Antifungal[1]
In Vitro	Anidulafungin (LY-303366) has MICs of ≤0.32 μg/mL for all Candida albicans (n=99), Candida glabrata (n=18), and Candida tropicalis (n=10) isolates tested. Anidulafungin is also active against Aspergillus species (minimum effective concentration at which 90% of the isolates are inhibited, 0.02 μg/mL) (n=20), is less active against Candida parapsilosis (MIC at which 90% of the isolates are inhibited [MIC90], 5.12 μg/mL) (n=10), and is inactive against C. neoformans (MIC90 >10.24 μg/mL) (n=15) and B. dermatitidis (MIC90, 16 μg/mL) (n=29).The MICs of Fluconazole for three strains of C. tropicalis, seven strains of C. glabrata, and two strains of Candida krusei are ≥16 μg/mL. The MICs of Anidulafungin for 11 of these 12 strains range from 0.08 to 0.32 mg/mL. The twelfth strain is a C. krusei strain (Fluconazole MIC, 32 μg/mL) for which the Anidulafungin MIC is 1.28 mg/mL. The MIC at which 90% of the isolates are inhibited (MIC90) for these 12 strains is 0.32 μg/mL. The Anidulafungin MIC90 for the remaining 18 C. glabrata isolates and C. tropicalis isolates for which the Fluconazole MICs are ≥ 8 μg/mL is also 0.32 mg/mL. Anidulafungin appeares equally active against Candida species for which the fluconazole MICs are ≥16 mg/mL and against those for which the fluconazole MICs are ≥ 8 μg/mL. Anidulafungin has significantly less activity against C. neoformans and B. dermatitidis than against C. albicans, C. glabrata, and C. tropicalis. Ketoconazole and amphotericin B are the most active antifungal agents tested for both C. neoformans and B. dermatitidis. Anidulafungin demonstrated potent in vitro activity against Aspergillus species with a MEC90 of 0.02 μg/mL. MICs of Anidulafungin for the control strain yeast isolates are 0.02 μg/mL for C. albicans ATCC 90028, 0.16 mg/mL for C. glabrata ATCC 90030, and >10.24 μg/mL for C. neoformans ATCC 90112[1]. Strains selected with CD101 that have a 2-fold or greater CD101 MIC increase also have at least a 2-fold MIC increase for Anidulafungin (ANF) and/or Caspofungin (CSF)[2].
Solvent&Solubility	***In Vitro:*** **DMSO : ≥ 30 mg/mL (26.31 mM)** * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	0.8770 mL	4.3850 mL	8.7701 mL
5 mM	0.1754 mL	0.8770 mL	1.7540 mL
10 mM	0.0877 mL	0.4385 mL	0.8770 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，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，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 **In Vitro** 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/或超声的方式助溶 1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline Solubility: 2.5 mg/mL (2.19 mM); Precipitated solution; Need ultrasonic 此方案可获得 2.5 mg/mL (2.19 mM) 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。 2.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (2.19 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (2.19 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。
References	[1]. Zhanel GG, et al. In vitro activity of a new semisynthetic echinocandin, LY-303366, against systemic isolates of Candida species, Cryptococcus neoformans, Blastomyces dermatitidis, and Aspergillus species. Antimicrob Agents Chemother. 1997 Apr;41(4):863-5 [2]. Locke JB, et al. Characterization of In Vitro Resistance Development to the Novel Echinocandin CD101 in Candida Species. Antimicrob Agents Chemother. 2016 Sep 23;60(10):6100-7.

实验参考：

Cell Assay	Stocks of CD101 (formerly SP 3025, biafungin, AF-025) are prepared fresh in 100% DMSO prior to use. The comparator antifungals Anidulafungin (ANF), Caspofungin (CSF), and Amphotericin B (AMB) are also prepared in 100% DMSO. MIC assays are performed via broth microdilution in accordance with CLSI guidelines, with the exception that test compounds are made up at a 50× final assay concentration and 100 μL assay mixture volumes are used (2 μL added to 98 μL of broth containing cells at 0.5×10^3 to 2.5×10^3 CFU/mL). All MIC assays are run at least three times, and a representative data set is shown. Quality control (QC) is assessed throughout the study via comparison of MIC values derived for WT C. krusei strain ATCC 6258 for AMB, CSF, and ANF with previously reported CLSI 24-h broth microdilution QC ranges[2].
References	[1]. Zhanel GG, et al. In vitro activity of a new semisynthetic echinocandin, LY-303366, against systemic isolates of Candida species, Cryptococcus neoformans, Blastomyces dermatitidis, and Aspergillus species. Antimicrob Agents Chemother. 1997 Apr;41(4):863-5 [2]. Locke JB, et al. Characterization of In Vitro Resistance Development to the Novel Echinocandin CD101 in Candida Species. Antimicrob Agents Chemother. 2016 Sep 23;60(10):6100-7.