



上海源叶生物科技有限公司  
Shanghai yuanye Bio-Technology Co., Ltd  
电话: 021-61312973 传真: 021-55068248  
网址: [www.shyuanye.com](http://www.shyuanye.com)  
邮箱: [shyysw@sina.com](mailto:shyysw@sina.com)

产品名称: **Walrycin B**  
产品别名: **Walrycin B**

### 生物活性:

#### Description

Walrycin B is a novel antibacterial compound specifically targeting the essential WalR response regulator. IC50 value: 0.39 ug/ml (MIC for *B. subtilis* 168); 3.13 ug/ml (MIC for *S. aureus* N315) [1] Target: bacterial WalR response regulator; Antibacterial Walrycin B is known as an analog of toxoflavin (a phytotoxin from *Burkholderia glumae*), which has been shown to have a strong MIC for *B. subtilis* and *S. aureus* but whose mode of action is not clear. The compound could also interact with WalR to cause bactericidal effects. Walrycins are a new class of potent small molecule compounds that kill bacterial cells by targeting the RR WalR and inhibiting this essential signal transduction pathway. They not only have therapeutic potential but will also prove to be useful reagents for the further study of the WalK/WalR TCS. Walrycin B target WalR and lead to cell death in both *B. subtilis* and *S. aureus*.

#### Solvent&Solubility

##### *In Vitro:*

DMSO : 11.5 mg/mL (34.10 mM; Need ultrasonic and warming)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing	1 mM		2.9651 mL	14.8254 mL	29.6507 mL
Stock Solutions	5 mM		0.5930 mL	2.9651 mL	5.9301 mL
	10 mM		0.2965 mL	1.4825 mL	2.9651 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 (7.41 mM); Suspended solution; Need ultrasonic

此方案可获得 2.5 mg/mL (7.41 mM) 的均匀悬浊液, 悬浊液可用于口服和腹腔注射。

以 1 mL 工作液为例, 取 100  $\mu$ L 25.0 mg/mL 的澄清 DMSO 储备液加到 400  $\mu$ L PEG300 中, 混合均匀向上述体系中加入 50  $\mu$ L Tween-80, 混合均匀; 然后继续加入 450  $\mu$ L 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 (7.41 mM); Clear solution; Need ultrasonic

此方案可获得 2.5 mg/mL (7.41 mM) 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  $\mu$ L 25.0 mg/mL 的澄清 DMSO 储备液加到 900  $\mu$ L 玉米油中, 混合均匀。



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#### References

- [1]. Gotoh Y, et al. Novel antibacterial compounds specifically targeting the essential WalR response regulator. J Antibiot (Tokyo). 2010 Mar;63(3):127-34.



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