碧云天网站 微信公众号

碧云天生物技术/Beyotime Biotechnology
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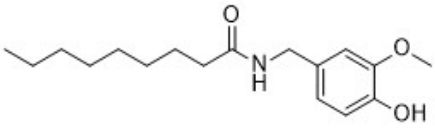
辣椒素(95%, HPLC)

产品编号	产品名称	包装
SM4012-10mM	辣椒素(95%, HPLC)	10mM×0.2ml
SM4012-25mg	辣椒素(95%, HPLC)	25mg
SM4012-100mg	辣椒素(95%, HPLC)	100mg

产品简介:

- **化学信息:**

中文名	辣椒素
英文名	Nonivamide
中文别名	合成辣椒素; 诺香草胺; 香草壬酰胺; 合成辣椒碱
英文别名	Pelargonic acid vanillylamide; Nonanoic acid vanillylamide; Pseudocapsaicin
来源	辣椒*Capsicum annuum* L.
化合物类型	生物碱(Alkaloids)
化学式	$C_{17}H_{27}NO_3$
分子量	293.40
CAS号	2444-46-4
纯度	95%, HPLC
溶剂/溶解度	DMSO : 100 mg/ml (340.83 mM)
溶液配制	5mg加入1.70ml DMSO, 或者每2.93mg加入1ml DMSO, 配制成10mM溶液。



- **生物信息**

产品描述	Nonivamide is found in herbs and spices. Nonivamide is an alkaloid from Capsicum species Nonivamide is a flavoring ingredient. Nonivamide is an organic compound and a capsaicinoid. It is an amide of pelargonic acid and vanillylamine. It is present in chili peppers, but is commonly manufactured synthetically. It is more heat-stable than capsaicin.				
信号通路	-				
靶点	TRPV1	-	-	-	-
IC_{50}	1 μM	-	-	-	-
体外研究	Nonivamide, a synthetic derivate of natural capsaicin, has an effective antifouling activity. Capsaicin exhibits 4d-EC50 values of 5.5±0.5 mg/L, 23±2 mg/L, 6.9±0.2 mg/L, and 15.6±0.4 mg/L in static toxicity tests conducted using Pseudomonas putida, Lake Erie bacteria, Vibrio natriegens, and Vibrio parahaemolyticus, respectively. A significant growth inhibitory effect ($p<0.01$) is observed in the group treated with 1 mg/L of Nonivamide for 4 d, and the EC50 value (4 d-EC50) is 5.1 mg/L. Nonivamide treatment causes calcium release from the ER and altered the transcription of growth arrest- and DNA damage-inducible transcript 3 (GADD153), GADD45α, GRP78/BiP, ATF3, CCND1, and CCNG2) in a manner comparable with prototypical ER stress-inducing agents. ER calcium flux is evaluated by pretreating cells with 2.5 μM thapsigargin for 5 min followed by addition of 2.5 μM Nonivamide. Treatment of TRPV1-overexpressing cells with 2.5 μM Nonivamide produces marked increases in cytosolic calcium due to release of calcium from ER stores. Treatment of TRPV1-overexpressing cells with 1 μM Nonivamide causes an approximate 50% loss in cell viability after a 24-h period. BEAS-2B cells treated with 100 and 200 μM Nonivamide also exhibits a shift in the relative amount of EIF2α-P and an increase in the expression of GADD153 mRNA and protein. Treatment with Nonivamide reduces lipid accumulation to a similar extent as CAP; the effects are not different from the effects after CAP treatment at any of the tested concentrations. Compared to untreated control cells, treatment with Nonivamide decreases lipid accumulation by 5.34±1.03% ($P<0.05$) at 0.01 μM up to 10.4±2.47%				

	(P<0.001) at 1 μM.Nonivamide is a agonist, which exhibits 4d-EC50 value of 5.1 mg/L in static toxicity tests.
体内研究	N/A
临床实验	NCT01708915：Acute Low Back Pain，Phase 3；NCT02300311：Low Back Pain，Phase 3.

参考文献：

1. Zhou J, et al. Environ Toxicol Chem. 2013,32(4):802-9.
2. Thomas KC, et al. J Pharmacol Exp Ther. 2007,321(3):830-8.
3. Rohm B, et al. J Cell Biochem. 2015,116(6):1153-63.

包装清单：

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SM4012-100mg	辣椒素(95%, HPLC)	100mg
-	说明书	1 份

保存条件：

-20℃保存，至少一年有效。固体粉末4℃保存，至少一个月有效。如果溶于非DMSO溶剂，建议分装后-80℃保存，预计6个月内有效。

注意事项：

- 本产品可能对人体有一定的毒害作用，请注意适当防护，以避免直接接触人体或吸入体内。
- 本产品仅限于专业人员的科学研究用，不得用于临床诊断或治疗，不得用于食品或药品，不得存放于普通住宅内。
- 为了您的安全和健康，请穿实验服并戴一次性手套操作。

使用说明：

1. 收到产品后请立即按照说明书推荐的条件保存。使用前可以在2,000-10,000g离心数秒，以使液体或粉末充分沉降至管底后再开盖使用。
2. 对于10mM溶液，可直接稀释使用。对于固体，请根据本产品的溶解性及实验目的选择相应溶剂配制成高浓度的储备液(母液)后使用。
3. 具体的最佳工作浓度请参考本说明书中的体外、体内研究结果或其它相关文献，或者根据实验目的，以及所培养的特定细胞和组织，通过实验进行摸索和优化。
4. 不同实验动物依据体表面积的等效剂量转换表请参考如下网页：
   https://www.beyotime.com/support/animal-dose.htm

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