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产品名称：
2-Methyl-1-[3-(4-morpholinyl)propyl]-5-phenyl-N-[3-(trifluoromethyl)phenyl]-1H-pyrrole-3-carboxamide
产品别名：HC-067047

生物活性：

Description	HC-067047 is a potent and selective TRPV4 antagonist and reversibly inhibits currents through the human, rat, and mouse TRPV4 orthologs with IC50 values of 48 nM, 133 nM, and 17 nM, respectively[1].	
IC_{50} & Target	IC50: 48 nM (human TRPV4), 133 nM (rat TRPV4), 17 nM (mouse TRPV4)[1]	
In Vitro	HC-067047 (1 μM; 24 hours; HEI-OC1 cells) treatment significantly decreases mRNA expression in high glucose cultured HEI-OC1 cells[2]. HC-067047 (1 μM; 24 hours; HEI-OC1 cells) treatment significantly decreases the expression of TRPV4 protein[2]. HC-067047 (1 μM; 48 hours; HEI-OC1 cells) treatment inhibits cell proliferation[2]. HC-067047 (1 μM; 48 hours; HEI-OC1 cells) treatment promotes cell apoptosis[2].	
	RT-PCR[2]	
	Cell Line:	HEI-OC1 cells
	Concentration:	1 μM
	Incubation Time:	24 hours
	Result:	The mRNA expression was significantly decreased.
	Western Blot Analysis[2]	
	Cell Line:	HEI-OC1 cells
	Concentration:	1 μM
	Incubation Time:	24 hours
	Result:	The expression of TRPV4 protein was significantly decreased.
	Cell Proliferation Assay[2]	
	Cell Line:	HEI-OC1 cells
	Concentration:	1 μM
	Incubation Time:	48 hours
	Result:	Inhibited cell proliferation.
	Apoptosis Analysis[2]	
	Cell Line:	HEI-OC1 cells
	Concentration:	1 μM
	Incubation Time:	48 hours
	Result:	Promoted cell apoptosis.
In Vivo	HC-067047 (0-50 mg/kg; intraperitoneal injection; for 30 minutes; cyclophosphamide-treated WT and Trpv4−/− mice, and naive WT mice) treatment increases functional bladder capacity and reduces micturition frequency in WT mice with cystitis. HC-067047 do not affect bladder function in Trpv4−/− mice[1].	
	Animal Model:	Cyclophosphamide-treated WT and $Trpv4^{-/-}$ mice, and naive WT mice[1]
	Dosage:	0 mg/kg, 1 mg/kg, 10 mg/kg, 50 mg/kg

<table>
<tr><td></td><td>Administration:</td><td>Intraperitoneal injection; for 30 minutes</td></tr>
<tr><td></td><td>Result:</td><td>Increased functional bladder capacity and reduces micturition frequency in WT mice with cystitis and did not affect bladder function in Trpv4$^{-/-}$ mice.</td></tr>
<tr><td>Solvent&Solubility</td><td colspan="2">
In Vitro:
DMSO： 50 mg/mL (106.04 mM; Need ultrasonic)
<table>
<tr><td rowspan="4">Preparing Stock Solutions</td><td>Solvent / Mass / Concentration</td><td>1 mg</td><td>5 mg</td><td>10 mg</td></tr>
<tr><td>1 mM</td><td>2.1208 mL</td><td>10.6042 mL</td><td>21.2085 mL</td></tr>
<tr><td>5 mM</td><td>0.4242 mL</td><td>2.1208 mL</td><td>4.2417 mL</td></tr>
<tr><td>10 mM</td><td>0.2121 mL</td><td>1.0604 mL</td><td>2.1208 mL</td></tr>
</table>
*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 (5.30 mM); Clear solution
此方案可获得 ≥ 2.5 mg/mL (5.30 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。
2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (5.30 mM); Clear solution
此方案可获得 ≥ 2.5 mg/mL (5.30 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。
3.请依序添加每种溶剂： 10% DMSO →90% corn oil
Solubility: ≥ 2.5 mg/mL (5.30 mM); Clear solution
此方案可获得 ≥ 2.5 mg/mL (5.30 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。
</td></tr>
<tr><td>References</td><td colspan="2">
[1]. Everaerts W et al. Inhibition of the cation channel TRPV4 improves bladder function in mice and rats with cyclophosphamide-induced cystitis.Proc Natl Acad Sci U S A. 2010 Nov 2;107(44):19084-9.
[2]. Xing Y, et al. Decreased Expression of TRPV4 Channels in HEI-OC1 Cells Induced by High Glucose Is Associated with Hearing Impairment. Yonsei Med J. 2018 Nov;59(9):1131-1137.
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