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产品名称: JNK-IN-7
产品别名: JNK inhibitor

生物活性:

Description	JNK-IN-7 is a potent JNK inhibitor with IC50 of 1.5, 2 and 0.7 nM for JNK1, JNK2 and JNK3, respectively.				
IC50 & Target	JNK3	JNK1	JNK2		
	0.7 nM (IC50)	1.5 nM (IC50)	2 nM (IC50)		
In Vitro	JNK-IN-7 is a relatively selective JNK inhibitor in cells. In addition to JNK 1, 2, 3, JNK-IN-7 also binds to IRAK1(IC50=14.1 nM), YSK4 (IC50=4.8 nM), ERK3 (IC50=22 nM), PIK3C3, PIP5K3 and PIP4K2C ^[1] . Expression of divalent metal-ion transporter 1 (DMT1) in HCT116 is demonstrated to be markedly decreased under stimulation with TNF for 24 and 48 h, while JNK-IN-7 can significantly reverse the decrease. TNF can down-regulate DMT1 expression, while JNK-IN-7 can markedly suppress this function ^[2] .				
Solvent&Solubility	In Vitro: DMSO : 33.33 mg/mL (67.53 mM; Need ultrasonic) H2O : < 0.1 mg/mL (insoluble)				
	<div>Preparing Stock Solutions</div>	<div>Solvent Concentration</div> <div>Mass</div>	1 mg	5 mg	10 mg
		1 mM	2.0261 mL	10.1305 mL	20.2610 mL
		5 mM	0.4052 mL	2.0261 mL	4.0522 mL
		10 mM	0.2026 mL	1.0130 mL	2.0261 mL
	<p>*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。</p> <p>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。</p> <p>In Vivo:</p> <p>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:</p> <p>——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</p> <p>1.请依序添加每种溶剂: 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline</p> <p>Solubility: ≥ 2.75 mg/mL (5.57 mM); Clear solution</p> <p>此方案可获得 ≥ 2.75 mg/mL (5.57 mM, 饱和度未知) 的澄清溶液。</p> <p>以 1 mL 工作液为例, 取 100 μL 27.5 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。</p> <p>2.请依序添加每种溶剂: 10% DMSO→ 90% (20% SBE-β-CD in saline)</p> <p>Solubility: 2.75 mg/mL (5.57 mM); Suspended solution; Need ultrasonic</p> <p>此方案可获得 2.75 mg/mL (5.57 mM)的均匀悬浊液, 悬浊液可用于口服和腹腔注射。</p> <p>以 1 mL 工作液为例, 取 100 μL 27.5 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理</p>				



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References	<p>[1]. Zhang T, et al. Discovery of Potent and Selective Covalent Inhibitors of JNK. Chem Biol. 2012 Jan 27;19(1):140-54.</p> <p>[2]. Wu W, et al. Divalent metal-ion transporter 1 is decreased in intestinal epithelial cells and contributes to the anemia in inflammatory bowel disease. Sci Rep. 2015 Nov 17;5:16344.</p>
实验参考:	
Cell Assay	Intestinal epithelial cell line (HCT116) is cultured in DMEM medium. To determine the mechanisms of TNF involved in regulating DMT1 expression, JNK-IN-7 (1 μ M), NF- κ B inhibitor (BAY 11-7082, 1 μ M), and caspase-3/8 inhibitor (Z-DEVD-FMK, 50 μ M) are also added into the culture medium. After 48 h of culture, cells are then collected to detect the expression of DMT1 by qRT-PCR ^[2] .
References	<p>[1]. Zhang T, et al. Discovery of Potent and Selective Covalent Inhibitors of JNK. Chem Biol. 2012 Jan 27;19(1):140-54.</p> <p>[2]. Wu W, et al. Divalent metal-ion transporter 1 is decreased in intestinal epithelial cells and contributes to the anemia in inflammatory bowel disease. Sci Rep. 2015 Nov 17;5:16344.</p>

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