

产品名称: NT157

产品别名: NT157

生物活性:

Description	NT157 (Tyrphostin NT157) is a selective IRS-1/2 inhibitor that induces Ser-phosphorylation and consequently the degradation of IRS-1/2. NT157 (Tyrphostin NT157) is a first-in-class anti-cancer agent that also targets Stat3 signaling pathway[1][2].			
IC ₅₀ & Target	IRS-1/2[1]; Stat3[2]			
In Vitro	NT157 (0.3-3 μM; 72 hours) shows a strong dose-dependent inhibition of growth in all cell lines tested, and the IC ₅₀ s ranges from 0.3 to 0.8 μM[1].			
	NT157 (1-3 μM; 24 hours) induces cell cycle arrest in MG-63 and U-2OS OS cells[1].			
	NT157 (1-3 μM; 48 hours) downregulates the Tyr-phosphorylation of IRS-1 in the MG-63 and U-2OS cells[1].			
	Cell Proliferation Assay[1]			
	Cell Line:	MG-63, OS-19, and U-2OS cells		
	Concentration:	0.3, 1, 3 μM		
	Incubation Time:	72 hours		
	Result:	Showed a strong dose-dependent inhibition of growth, and the IC ₅₀ s ranges from 0.3 to 0.8 μM.		
	Cell Cycle Analysis[1]			
	Cell Line:	MG-63, U-2OS OS cells		
	Concentration:	1, 3 μM		
	Incubation Time:	24 hours		
	Result:	Induced cell cycle arrest in the G2/M phase.		
	Western Blot Analysis[1]			
	Cell Line:	MG-63, U-2OS OS cells		
	Concentration:	1, 3 μM		
Incubation Time:	48 hours			
Result:	Downregulated the Tyr-phosphorylation of IRS-1 in the MG-63 and U-2OS cells.			
In Vivo	NT157 (50 mg/kg; i.p.; three times per week for 6 weeks) significantly delayed tumor growth in castrated mice bearing LNCaP xenografts [3].			
	Animal Model:	6- to 8- week-old male athymic nude mice (LNCaP xenografts)[3]		
	Dosage:	50 mg/kg		
	Administration:	i.p.; three times per week for 6 weeks		
	Result:	Significantly delayed tumor growth.		
In Vitro:				
DMSO : ≥ 30 mg/mL (72.77 mM)				
* "≥" means soluble, but saturation unknown.				
Preparing Stock Solutions	<div>SolventMassConcentration</div>	1 mg	5 mg	10 mg
	1 mM	2.4257 mL	12.1283 mL	24.2565 mL
	5 mM	0.4851 mL	2.4257 mL	4.8513 mL
	10 mM	0.2426 mL	1.2128 mL	2.4257 mL

<p>Solvent&Solubility</p>	<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℃，6 months；-20℃，1 month。 -80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。</p> <p><i>In Vivo:</i></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 Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (6.06 mM，饱和度未知) 的澄清溶液。</p> <p>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。</p> <p>2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (6.06 mM，饱和度未知) 的澄清溶液。</p> <p>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 生理盐水溶液中，混合均匀。</p>
<p>References</p>	<p>[1]. Downregulated the Tyr-phosphorylation of IRS-1 in the MG-63 and U-2OS cells.</p> <p>[2]. Flashner-Abramson E, et al. Targeting melanoma with NT157 by blocking Stat3 and IGF1R signaling. Oncogene. 2016 May 19;35(20):2675-80.</p> <p>[3]. Ibuki N, et al. The tyrphostin NT157 suppresses insulin receptor substrates and augments therapeutic response of prostate cancer. Mol Cancer Ther. 2014 Dec;13(12):2827-39.</p> <p>[4]. Ishii H, et al. miR-130a and miR-145 reprogram Gr-1+CD11b+ myeloid cells and inhibit tumor metastasis through improved host immunity. Nat Commun. 2018 Jul 4;9(1):2611.</p>