



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: **Ro 41-1049 (hydrochloride)**

产品别名: **Ro 41-1049 hydrochloride**

生物活性:

Description	Ro 41-1049 hydrochloride is a reversible and selective inhibitor of monoamine oxidase-A (MAO-A). An homogeneous population of high affinity binding sites for [3H]Ro 41-1049 is found in membrane preparations from human frontal cortex and placenta (Kd values of 16.5 and 64.4 nM, respectively)[1].				
IC50 & Target	MAO-A[1]				
In Vivo	Ro 41-1049 (1-50 mg/kg; intraperitoneal injection; for 3 hours; Sprague-Dawley rats) treatment inhibits dopamine metabolite formation and increases dopamine levels in a dose-dependent fashion. Pretreatment with Ro 41-1049 (20 mg/kg) significantly increases dopamine formation following L-dopa administration (100 mg/kg IP) while decreasing formation of 3,4-dihydroxyphenylacetic acid (DOPAC) and homovanillic acid (HVA)[2].				
	Animal Model:	Sprague-Dawley rats (200-240 g)[2]			
	Dosage:	1 mg/kg, 5 mg/kg, 10 mg/kg, 20 mg/kg, or 50 mg/kg			
	Administration:	Intraperitoneal injection; for 3 hours			
	Result:	Inhibited dopamine metabolite formation and increased dopamine levels in a dose-dependent fashion. Pretreatment with the concentration of 20 mg/kg significantly increased dopamine formation following L-dopa administration while decreasing formation of DOPAC and HVA.			
Solvent&Solubility	In Vitro: DMSO : ≥ 32 mg/mL (106.04 mM) H2O : 25 mg/mL (82.84 mM; Need ultrasonic) * "≥" means soluble, but saturation unknown.				
	Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
		1 mM	3.3138 mL	16.5689 mL	33.1378 mL
		5 mM	0.6628 mL	3.3138 mL	6.6276 mL
		10 mM	0.3314 mL	1.6569 mL	3.3138 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℃, 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。				
	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 (8.28 mM); Clear solution				



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	<p>此方案可获得 <math>\geq 2.5</math> mg/mL (8.28 mM, 饱和度未知) 的澄清溶液。</p> <p>以 1 mL 工作液为例, 取 100 <math>\mu</math>L 25.0 mg/mL 的澄清 DMSO 储备液加到 400 <math>\mu</math>L PEG300 中, 混合均匀向上述体系中加入 50 <math>\mu</math>L Tween-80, 混合均匀; 然后继续加入 450 <math>\mu</math>L 生理盐水定容至 1 mL。</p> <p>2.请依序添加每种溶剂: 10% DMSO<math>\rightarrow</math> 90% (20% SBE-<math>\beta</math>-CD in saline)</p> <p>Solubility: <math>\geq 2.5</math> mg/mL (8.28 mM); Clear solution</p> <p>此方案可获得 <math>\geq 2.5</math> mg/mL (8.28 mM, 饱和度未知) 的澄清溶液。</p> <p>以 1 mL 工作液为例, 取 100 <math>\mu</math>L 25.0 mg/mL 的澄清 DMSO 储备液加到 900 <math>\mu</math>L 20% 的 SBE-<math>\beta</math>-CD 生理盐水水溶液中, 混合均匀。</p> <p>3.请依序添加每种溶剂: 10% DMSO <math>\rightarrow</math> 90% corn oil</p> <p>Solubility: <math>\geq 2.5</math> mg/mL (8.28 mM); Clear solution</p> <p>此方案可获得 <math>\geq 2.5</math> mg/mL (8.28 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。</p> <p>以 1 mL 工作液为例, 取 100 <math>\mu</math>L 25.0 mg/mL 的澄清 DMSO 储备液加到 900 <math>\mu</math>L 玉米油中, 混合均匀。</p>
References	<p>[1]. Cesura AM, et al. Characterization of the binding of [3H]Ro 41-1049 to the active site of human monoamine oxidase-A. Mol Pharmacol. 1990 Mar;37(3):358-66.</p> <p>[2]. Brannan T, et al. Effect of a selective MAO-A inhibitor (Ro 41-1049) on striatal L-dopa and dopamine metabolism: an in vivo study. J Neural Transm Park Dis Dement Sect. 1994;8(1-2):99-105.</p>

源叶生物