



上海源叶生物科技有限公司
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产品名称: **IMISOPASEM MANGANESE**
产品别名: **M40403**

生物活性:						
Description		Imisopasem manganese (M40403) is a stable non-peptidyl mimetic of manganese superoxide MnSOD.				
In Vitro		M40403 is a small molecule, synthetic manganese containing superoxide dismutase mimetic (SODm) that removes superoxide anions without interfering with other reactive species known to be involved in inflammatory responses (e.g. nitric oxide, NO and peroxynitrite, ONOO-)[1].				
In Vivo		M40403 is a small-molecule superoxide dismutase mimetic that has shown efficacy in animal model disease states in which superoxide anions are thought to play a key role. M40403 inhibits the inflammatory response following the intrapleural injection of carrageenan in rats. All parameters of inflammation are attenuated by M40403 except for NOx, PGE2 and IL-10 which remains unaltered[1]. Decreased apoptosis of the large and particularly the small bowel and marked recovery of both lymphoid and hematopoietic tissues occurs in the M40403 pre-treated mice. M40403 is effective in reducing TBI-induced tissue destruction and has potential as a new radioprotective agent[2].				
Solvent&Solubility		In Vitro: H ₂ O : 16 mg/mL (33.38 mM; Need ultrasonic and warming)				
		Preparing Stock Solutions	SolventMassConcentration	1 mg	5 mg	10 mg
			1 mM	2.0862 mL	10.4308 mL	20.8616 mL
			5 mM	0.4172 mL	2.0862 mL	4.1723 mL
			10 mM	0.2086 mL	1.0431 mL	2.0862 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。						
References		[1]. Salvemini D, et al. Pharmacological manipulation of the inflammatory cascade by the superoxide dismutase mimetic,M40403. Br J Pharmacol. 2001 Feb;132(4):815-27. [2]. Masini E, et al. Protective effects of M40403, a selective superoxide dismutase mimetic, in myocardial ischaemia and reperfusion injury in vivo. Br J Pharmacol. 2002 Jul;136(6):905-17.				
实验参考:						
Animal Administration		Rats: Male Sprague-Dawley rats are used in the study. M40403 (5-20 mg kg⁻¹), or an equivalent volume (0.3 mL) of vehicle (26 mm sodium bicarbonate buffer, pH 8.1-8.3), is injected intraperitoneally (i.p.) 15 min before carrageenan. At 4 h after the injection of carrageenan, the animals are killed by inhalation of CO₂[1]. Mice: 30 mg dry powder M40403 is dissolved in 6.0 ml SBC adjusted to pH 8.3 with 1 M NaOH. This stock solution is diluted to 1.25 mg/mL in SBC. Two experimental models are tested. In one, the dose of IR is held constant at 8.5 Gy total body irradiation (TBI). The mice are injected i.p. with a single dose of 40 mg/kg, 30 mg/kg, 20 mg/kg or 10 mg/kg M40403. Thirty minutes later the mice receives 8.5 Gy total body irradiation (TBI). Control animals receives 0.1 ml of SBC buffer prior to				



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	TBI. In the other model, groups of 20 mice receives either 6.5 or 7.5 Gy TBI. One half of each group is treated with 2.0 mg/kg M40403 i.p. and the other with SBC 30 min before TBI. All are followed for survival[2].
References	[1]. Salvemini D, et al. Pharmacological manipulation of the inflammatory cascade by the superoxide dismutase mimetic, M40403. Br J Pharmacol. 2001 Feb;132(4):815-27. [2]. Masini E, et al. Protective effects of M40403, a selective superoxide dismutase mimetic, in myocardial ischaemia and reperfusion injury in vivo. Br J Pharmacol. 2002 Jul;136(6):905-17.



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