# **PRODUCT** INFORMATION



## Imisopasem Manganese

Item No. 31112

CAS Registry No.:	218791-21-0	
Formal Name:	(PB-7-11-2344'3')-	
	dichloro[(4aR,13aR,17aR,21aR)-	~
	1,2,3,4,4a,5,6,12,13,13a,14,15,16,	
	17,17a,18,19,20,21,21a-eicosahydro-	
	11,7-nitrilo-7H-dibenzo[b,h]	N
	[1,4,7,10]tetraazacycloheptadecine-	
	кN <sup>5</sup> ,кN <sup>13</sup> ,кN <sup>18</sup> ,кN <sup>21</sup> ,кN <sup>22</sup> ]-manganese	
Synonym:	M40403	
MF:	$C_{21}H_{35}Cl_2MnN_5$	
FW:	483.4	
Purity:	≥95%	
Supplied as:	A crystalline solid	
Storage:	-20°C	
Stability:	≥4 years	

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

#### Laboratory Procedures

Imisopasem manganese is supplied as a crystalline solid. A stock solution may be made by dissolving the imisopasem manganese in the solvent of choice, which should be purged with an inert gas. Imisopasem manganese is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of imisopasem manganese in these solvents is approximately 20, 5, and 3 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of imisopasem manganese can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of imisopasem manganese in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

#### Description

Imisopasem manganese is a nonpeptide superoxide dismutase (SOD) mimetic.<sup>1</sup> It catalyzes dismutation of the superoxide anion with a catalytic rate constant of greater than 2 x 10<sup>7</sup> M<sup>-1</sup>s<sup>-1</sup>. Imisopasem manganese (1-10 mg/kg, i.v. bolus) reduces carrageenan-induced paw edema and inhibits increases in paw exudate levels of TNF- $\alpha$ , IL-1 $\beta$ , and lactate dehydrogenase (LDH) in rats. It inhibits increases in lung and ileum myeloperoxidase (MPO) levels, indicating reduced neutrophil infiltration, and increases in plasma malondialdehyde (MDA), TNF- $\alpha$ , and IL-1 $\beta$  levels in a rat model of ischemia-reperfusion injury and shock induced by splanchnic artery occlusion (SAO) when administered at doses of 0.1, 0.3, and 1 mg/kg.

#### Reference

1. Salvemini, D., Wang, Z.Q., Zweier, J.L., et al. A nonpeptidyl mimic of superoxide dismutase with therapeutic activity in rats. Science 286(5438), 304-306 (1999).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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