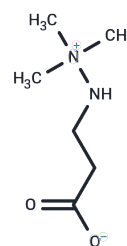


Mildronate

Chemical Properties

CAS No. :	76144-81-5
Formula:	C ₆ H ₁₄ N ₂ O ₂
Molecular Weight:	146.19
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Mildronate (Meldonium) is an inhibitor of biosynthesis of L-carnitine by gamma-butyrobetaine (GBB) hydroxylase and as a competitive inhibitor of renal carnitine reabsorption.
Targets(IC50)	Mitochondrial Metabolism,Hydroxylase
In vitro	Mildronate (40 μM) inhibits the reaction of γ-butyrobetaine hydroxylase with γ-butyrobetaine with Km and Vmax of 36.8 μM and 0.08 nmol/min/mg protein, respectively. [1]

Solubility Information

Solubility	H ₂ O: 252.5 mg/mL (1727.2 mM),Sonication is recommended. DMSO: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.8404 mL	34.2021 mL	68.4041 mL
5 mM	1.3681 mL	6.8404 mL	13.6808 mL
10 mM	0.684 mL	3.4202 mL	6.8404 mL
50 mM	0.1368 mL	0.684 mL	1.3681 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Simkhovich BZ, et al. *Biochem Pharmacol*, 1988, 37(2), 195-202.

Liepinsh E, et al. *Life Sci*, 2008, 83(17-18), 613-619.

Pupure J, et al. *Neurosci Lett*, 2010, 470(2), 100-105.

Liepinsh E, et al. *Br J Pharmacol*, 2009, 157(8), 1549-1556.

Schobersberger W, et al. Story behind meldonium—from pharmacology to performance enhancement: a narrative review. *Br J Sports Med*. 2017 Jan;51(1):22-25.

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