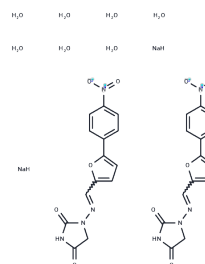


Dantrolene sodium hemiheptahydrate

Chemical Properties

CAS No. :	24868-20-0
Formula:	C ₁₄ H ₉ N ₄ NaO ₅ ·3.5H ₂ O
Molecular Weight:	399.29
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	Dantrolene depresses excitation-contraction coupling in skeletal muscle by binding to the ryanodine receptor 1 and decreasing intracellular calcium concentration. Ryanodine receptors mediate the release of calcium from the sarcoplasmic reticulum, an essential step in muscle contraction. Dantrolene sodium hemiheptahydrate (Sodium dantrolene) is the sodium salt form of dantrolene, a hydantoin derivative, and direct-acting skeletal muscle relaxant.
Targets(IC50)	Apoptosis, Calcium Channel, Autophagy, ROS
In vitro	Dantrolene sodium can inhibit intracellular Ca ²⁺ release from the sarcoplasmic reticulum. In the linoleic acid emulsion system, Dantrolene sodium has strong antioxidant activity.
In vivo	In contrast of the slow soleus (SOL) muscle, Dantrolene sodium (5 mg/kg) has a greater inhibitory on the twitch contraction of the fast extensor digitorum longus (EDL) muscle.

Solubility Information

Solubility	DMSO: 7.86 mg/mL (19.68 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 0.79 mg/mL (1.98 mM), Solution. 10% DMSO+40% PEG300+5% Tween-80+45% Saline: 0.5 mg/mL (1.25 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5044 mL	12.5222 mL	25.0445 mL
5 mM	0.5009 mL	2.5044 mL	5.0089 mL
10 mM	0.2504 mL	1.2522 mL	2.5044 mL
50 mM	0.0501 mL	0.2504 mL	0.5009 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

Leslie GC., et al. The action of dantrolene sodium on rat fast and slow muscle in vivo. Br J Pharmacol. 1981 Apr;72(4):665-72.

Büyükokuroğlu ME., et al. In vitro antioxidant properties of dantrolene sodium. Pharmacol Res. 2001 Dec;44(6):491-4.

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