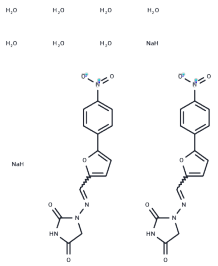
Data Sheet (Cat.No.T4054)

TargetMol

Dantrolene sodium hemiheptahydrate

Chemical Properties



CAS No. : 24868-20-0

Formula: C14H9N4NaO5·3.5H2O

Molecular Weight: 399.29

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

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)	Calcium Channel,Autophagy
In vitro	Dantrolene sodium can inhibit intracellular Ca2+ 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: 16.67 mg/mL (41.75 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

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.

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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