

Catalog # 10-2208 Dantrolene Na

CAS# 14663-23-1 1-[(5-(p-Nitrophenyl)furfurylidene)amino]hydantoin sodium salt Lot # X101989



Inhibits release of Ca²⁺ from sarcoplasmic reticulum via inhibition of ryanodine receptor channels with selectivity for RYR1 and RYR3 over RYR2.¹ Protects against quisqualate and NMDA-induced cytotoxicity in cultured cerebral cortical neurons.² Displays neuroprotective effects.³ Prevents cell death in neural progenitor cells derived from Wolfram syndrome iPS cells.⁴

- 1) Zhao et al. (2001), Dantrolene inhibition of ryanodine receptor Ca2+ release channels. Molecular mechanism and isoform selectivity; J. Biol. Chem., **276** 13810
- 2) Frandsen and Schousboe (1992), Mobilization of dantrolene-sensitive intracellular calcium pools is involved in the cytotoxicity induced by quisqualate and N-methyl-D-aspasrtate but not by 2-amino-3-(3-hydroxy-5-methylisoxazol-4-yl)propionate and kainite in cultured cerebral cortical neurons; Proc. Natl. Acad. Sci. USA, 89 2590
- 3) Muehlschlegel and Sims (2009), Dantrolene: mechanisms of neuroprotection and possible clinical applications in the neurointensive care unit, Neuro. Crit. Care, **10** 103
- 4) Lu et al. (2014), A calcium-dependent protease as a potential therapeutic target for Wolfram syndrome; Proc. Natl. Acad. Sci. USA, **111** E5292

PHYSICAL DATA

Molecular Weight:	336.23
Molecular Formula:	C ₁₄ H ₉ N ₄ O ₅ Na
Purity:	99% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 3 mg/ml) or in a 1:1 mixture of DMF and Ethanol (up to 20 mg/ml)
Physical Description:	Orange solid
Storage and Stability:	Store as supplied desiccated at room temperature for up to 1 year from the date of purchase.
	Solutions in DMSO or DMF/ethanol may be stored at -20°C for up to 1 month.

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