

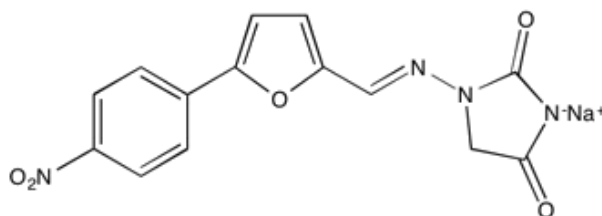
Catalog # 10-2208

Dantrolene Na

CAS# 14663-23-1

1-[(5-(p-Nitrophenyl)furfurylidene)amino]hydantoin sodium salt

Lot # X101991



Inhibits release of Ca^{2+} 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 Ca^{2+} 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-aspartate but not by 2-amino-3-(3-hydroxy-5-methylisoxazol-4-yl)propionate and kainate 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:	$\text{C}_{14}\text{H}_9\text{N}_4\text{O}_5 \text{ Na}$
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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