

Product Data Sheet

Product Name: Ryanodine

Cat. No.: GC12607

Chemical Properties

Cas. No. 15662-33-6

Chemical Name (3R,4R,4aR,4a1R,6R,6aR,7R,8S,8aR,9R,9aR)-4,4a1,6,7,8a,9a-hexahydroxy-7-isopropyl-3,6a,9-trimethyldodecahydro-6,9-methanobenzo[1,2]pentaleno[1,6-bc]furan-8-yl 1H-pyrrole-2-carboxylate

SMILES O[C@@]1([C@@]([C@]2(C)C3)([C@H]4OC(C5=CC=CN5)=O)O)[C@]([C@@]4(C(C)C)O)(C)[C@]3(O)O[C@]1([C@@H]6O)[C@]2(CC[C@H]6C)O

Formula C₂₅H₃₅NO₉

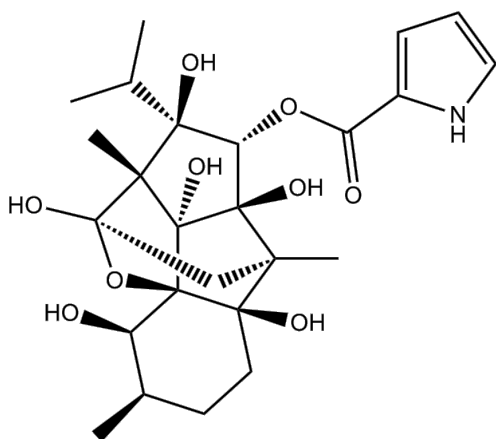
M.Wt 493.55

Solubility <12.34mg/ml in DMSO; <4.94mg/ml in ethanol Storage Desiccate at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

Ryanodine is a cell permeant ryanodine receptor modulator. Ryanodine can either stimulate or inhibit Ryanodine-mediated Ca²⁺ release depending on its concentrations. Poisonous diterpenoid found in

Caution: Product has not been fully validated for medical applications. For research use only.

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Ryania speciosa.

Ryanodine (100-5000 nM, 30-120 minutes) irreversibly depresses twitch and tetanic tension of both fast and slow muscle in a dose-related manner[1]. At concentrations above 250 nM, ryanodine induces a slowly developing, dose dependent contracture which could not be blocked by 5 mMCo²⁺ [1].

References:

- [1]. Meissner G, et al. Ryanodine activation and inhibition of the Ca²⁺ release channel of sarcoplasmic reticulum. J Biol Chem. 1986 May 15;261(14):6300-6.
- [2]. Fryer MW, et al. The action of ryanodine on rat fast and slow intact skeletal muscles. J Physiol. 1989 Jul;414:399-413.

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