

Product datasheet

Ryanodine, Ca²⁺ release modulator ab120083

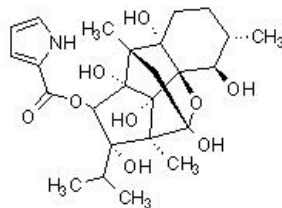
[37 References](#) [2 Images](#)

Overview

Product name	Ryanodine, Ca ²⁺ release modulator
Description	Ca ²⁺ release modulator
Biological description	Alkaloid that binds with high affinity to ryanodine receptors to modulate intracellular Ca ²⁺ release. Has complex actions and may stimulate or inhibit Ca ²⁺ release, depending on the concentration used.

CAS Number 15662-33-6

Chemical structure



Properties

Chemical name	1 <i>H</i> -Pyrrole-2-carboxylic acid (3 <i>S</i> ,4 <i>R</i> ,4 <i>aR</i> ,6 <i>S</i> ,7 <i>S</i> ,8 <i>R</i> ,8 <i>aS</i> ,8 <i>bR</i> ,9 <i>S</i> ,9 <i>aS</i>)-dodecahydro-4,6,7,8 <i>a</i> ,8 <i>b</i> ,9 <i>a</i> -hexahydroxy-3,6 <i>a</i> ,9-trimethyl-7-(1-methylethyl)-6,9-methanobenzo[1,2]pentaleno[1,6- <i>bc</i>]furan-8-yl ester
Molecular weight	493.55
Molecular formula	C ₂₅ H ₃₅ NO ₉
PubChem identifier	5114
Storage instructions	Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in ethanol to 10 mM
Handling	Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour. Toxic, refer to SDS for further information. Need more advice on solubility, usage and handling? Please visit our frequently asked

[questions \(FAQ\) page](#) for more details.

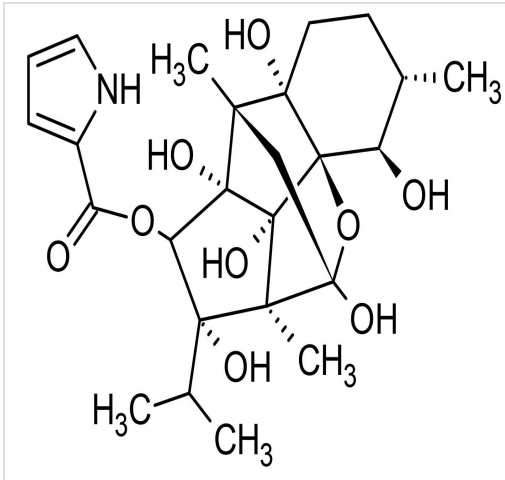
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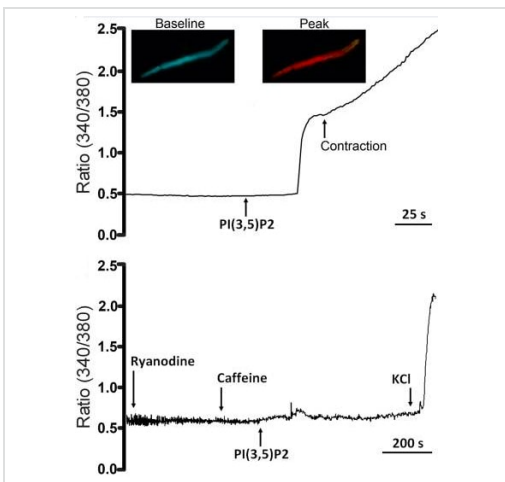
Ryania speciosa

Images



2D chemical structure image of ab120083, Ryanodine, Ca²⁺ release modulator

Chemical Structure - Ryanodine, Ca²⁺ release modulator (ab120083)



Ryanodine inhibits the elevation of intracellular Ca²⁺ by PI(3,5)P2 in primary cardiac myocytes. Top figure shows fura-2 ratiometric changes in intracellular Ca²⁺ in an isolated ventricular adult cardiac myocyte after treatment with PI(3,5)P2, ultimately resulting in contraction. Bottom figure shows that ryanodine inhibited the release of SR Ca²⁺ to both caffeine and PI(3,5)P2.

Functional Studies - Ryanodine, Ca²⁺ release modulator (ab120083)

Image from Touchberry CD et al., J Biol Chem. 2010;285(51):40312-21. Fig 4(A-B).; doi: 10.1074/jbc.M110.179689.

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