

Ryanodine

Cat. #: R-500

Origin: Isolated from the stem and roots of the *Ryania speciosa* plant.

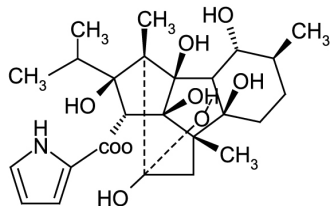
Source description: Natural (contains Ryanodine and Didehydroryandodine).

M.W.: 493.5 daltons.

Purity: >98%.

Effective concentration: 1-25 μ M.

Structure:



Chemical name: 1H-Pyrrole-2-carboxylic acid, (3S,4R,4aR,6S,7S,8R,8aS,8bR,9S,9aS)-dodecahydro-4,6,7,8 a,8b,9a-hexahydroxy-3,6a,9-trimethyl-7-(1-methylethyl)-6,9-methanobenzo[1,2]pentaleno[1,6-bc]furan-8-yl ester.

Molecular formula: C₂₅H₃₅NO₉.

CAS No.: 15662-33-6.

Activity: Ryanodine is a blocker of the Ryanodine receptor (RyR) Ca²⁺ release channel¹.

References:

1. Sutko, J.L. *et al.* (1997) *Pharmacol. Rev.* **49**, 53.

Sizes: 1 mg or 5 x 1 mg lyophilized powder.

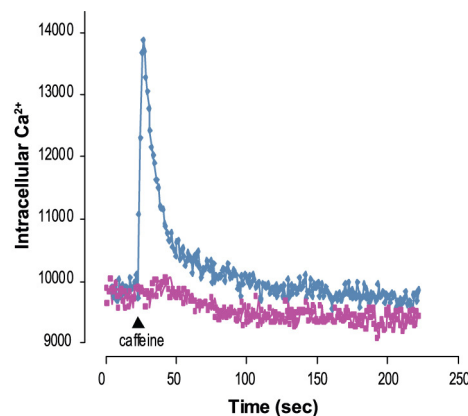
Storage before reconstitution: Lyophilized powder can be stored intact at room temperature for several weeks. For longer periods, it should be stored at -20°C.

Reconstitution: Methanol. Centrifuge all product preparations before use (10000 x g 5 min).

Concentration after reconstitution: Dissolving 1 mg in 1 ml gives a stock solution of 2 mM.

Storage and stability after reconstitution: Up to one week at 4°C or six months at -20°C.

Bioassay: Ryanodine inhibits caffeine-induced Ryanodine receptor activation in cardiomyocyte cells.



Ca²⁺ flow from the ER to the cytosol in fluo-3 AM-loaded cardiomyocyte cells, stimulated with 2 mM caffeine in the presence (purple) or absence (blue) of 25 μ M **Ryanodine** (#R-500). Time of stimulation with caffeine is represented by the arrow. Extracellular Ca²⁺ was absorbed with EGTA.

For research purposes only, not for human use.
Last Update: July, 2010.