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Molecular Tools for the Life Science Community

Certificate of Analysis

Resiniferatoxin (RTX)

Cat. #: R-400

Origin: *Euphorbia resinifera* (Moroccan cactus).

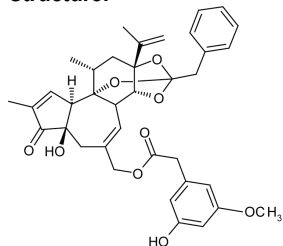
Source description: Natural.

M.W.: 628.72 daltons.

Purity: >95%.

Effective concentration: 20 nM - 1 μ M.

Structure:



Chemical name: 4-Hydroxy-3-methoxy-
[(2S,3aR,3bS,6aR,9aR,9bR,10R,11aR)-3a,3b,6,6a,9a,10,11,11a-
octahydro-6a-hydroxy-8,10-dimethyl-11a-(1-methylethenyl)-7-oxo-2-
(phenylmethyl)-7H-2,9 b-epoxyazuleno[5,4-e]-1,3-benzodioxol-5-
yl]benzeneaceta.

Molecular formula: C₃₇H₄₀O₉.

CAS No.: 57444-62-9.

Activity: Resiniferatoxin is a potent and selective agonist of the TRPV1 (Vanilloid/Capsaicin receptor 1) channel¹.

References:

1. Szallasi, A. and Blumberg, P.M. (1989) *Neurosci.* **30**, 515.

Sizes: 0.5 mg, 5 x 0.5 mg, or 1 mg lyophilized powder.

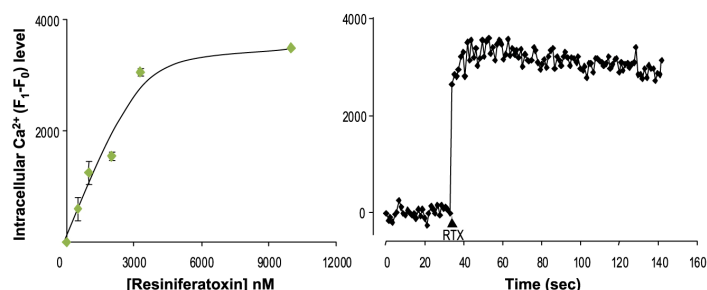
Storage before reconstitution: Lyophilized powder can be stored intact at room temperature for several weeks. For longer periods, it should be stored at -20°C.

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

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

Protect from light.

Bioassay: Resiniferatoxin induces Ca²⁺ influx via activation of TRPV1 expressed in HEK293 cells.



Cells were loaded with 1mM fluo-3 AM and then stimulated with **Resiniferatoxin** (#R-400). The left panel shows the intracellular Ca²⁺ levels 10 sec post stimulation with different concentrations of Resiniferatoxin plotted against drug concentration (ED₅₀ = 2 μ M). The right panel shows cytoplasmic Ca²⁺ before and after stimulation of cells with 10 μ M Resiniferatoxin.

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