

Resiniferatoxin (RTX) – Potent TRPV1 Agonist for Pain Relief

The mode of action of RTX is to bind to and activate TRPV1, a non-selective cation channel in the plasma membrane of primary afferent sensory neurons. This increases the permeability to cations and leads to an influx of calcium and sodium ions. The influx of cations causes the neurons to depolarize, transmitting signals similar to those that would be transmitted if the innervated tissue were being burned or damaged. The treatment of sensory neurons with RTX causes calcium cytotoxicity that selectively depletes TRPV1(+) neurons. In short, RTX activates sensory neurons responsible for the perception of pain, mediating pain (nociception) and neurogenic inflammation. The clinical efficacy of RTX in treating severe pain in cancer and knee osteoarthritis is under way.

REVIEWS: Resiniferatoxin: Nature's Precision Medicine to Silence TRPV1-Positive Afferents: A. Szallasi; Int. J. Mol. Sci. 24, 15042 (2023) • Intraarticular resiniferatoxin, a potent TRPV1 agonist, for treatment of osteoarthritic pain: M.J. Iadarola, et al.; Pain Manag. 15, 659 (2025)



FIGURE: Chronic inflammatory diseases cause pain and are possible targets for clinical use of RTX.

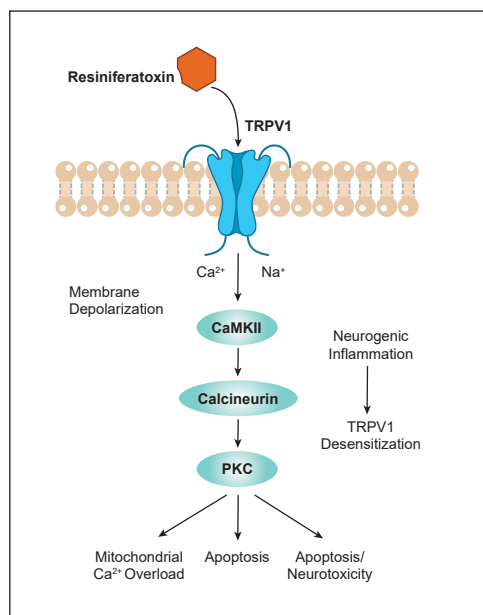


FIGURE: Schematic Mode of Action of RTX.

Resiniferatoxin (RTX) (high purity)

AG-CN2-0534

100 µg | 500 µg | 2 x 500 µg | 10 mg | 5 x 10 mg

BULK from Stock!

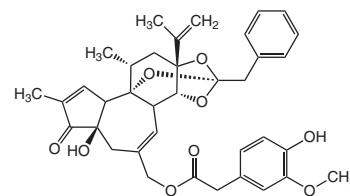
CAS: 57444-62-9

Source: Isolated from *Euphorbia resinifera**

Purity: >98% HPLC

Identity: Determined by MS

* *E. resinifera* is included in CITES Appendix II. AdipoGen's RTX is isolated from cultivated plants from European plant nurseries in compliance with the CITES regulation.



WARNING: For Research Use Only (RUO). Our products are not intended or approved for human or veterinary use.