

## Thapsigargin

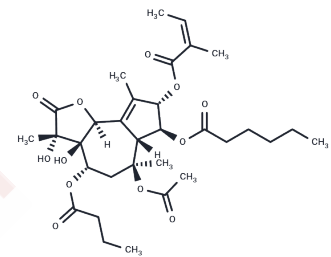
## Chemical Properties

CAS No. : 67526-94-7

Formula: C<sub>32</sub>H<sub>46</sub>O<sub>12</sub>

Molecular Weight: 622.70

Storage: Keep away from moisture, Keep away from direct sunlight  
 Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
 Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Thapsigargin is a sesquiterpene lactone natural product isolated from the poisonous plant <i>Thapsia garganica</i> . Thapsigargin is a potent non-competitive inhibitor of the sarcoplasmic reticulum/endoplasmic reticulum calcium ATPase (SERCA) ( $IC_{50} \approx 10-30$ nM). By specifically blocking the SERCA pump, it depletes endoplasmic reticulum calcium stores and elevates cytoplasmic calcium levels, thereby activating mast cells and leukocytes to release histamine, inducing endoplasmic reticulum stress and apoptosis. Thapsigargin can be used in studies of calcium signaling pathways and inflammatory responses.
Targets( $IC_{50}$ )	Others

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6059 mL	8.0295 mL	16.0591 mL
5 mM	0.3212 mL	1.6059 mL	3.2118 mL
10 mM	0.1606 mL	0.803 mL	1.6059 mL
50 mM	0.0321 mL	0.1606 mL	0.3212 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Ali H, et al. The ability of thapsigargin and thapsigarginin to activate cells involved in the inflammatory response. Br J Pharmacol. 1985 Jul;85(3):705-12.

Quynh Doan NT, Christensen SB. Thapsigargin, Origin, Chemistry, Structure-Activity Relationships and Prodrug Development. Curr Pharm Des. 2015;21(38):5501-5517.

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