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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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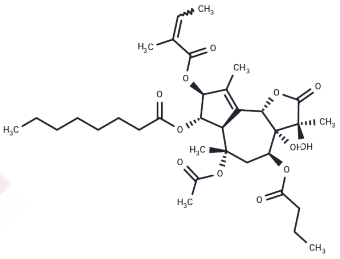
Data Sheet (Cat.No.TQ0302)

TargetMol

Thapsigargin

Chemical Properties



CAS No. : 67526-95-8

Formula: C34H50O12

Molecular Weight: 650.75

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Thapsigargin is a natural product, an inhibitor of sarcoplasmic/endoplasmic reticulum Ca2+ ATPase (SERCA) and an endoplasmic reticulum stress inducer. Thapsigargin increases cytoplasmic calcium concentration by blocking the ability of cells to pump calcium into the sarcoplasmic and endoplasmic reticulum.
Targets(IC50)	Apoptosis,SARS-CoV,Calcium Channel
In vitro	**METHODS**: Human rheumatoid arthritis synoviocytes MH7A were treated with Thapsigargin (0.001-1 μM) for 2-4 days, and cell proliferation was detected using the SRB. **RESULTS**: Thapsigargin inhibited the proliferation of MH7A cells in a time- and dose-dependent manner. [1] **METHODS**: Human hepatocellular carcinoma cells HepG2 were treated with Thapsigargin (25-100 nM) for 24 h. Endoplasmic reticulum stress/UPR gene expression was detected by RT-qPCR. **RESULTS**: Thapsigargin treatment consistently induced ER stress gene expression only at elevated concentrations of 50 and 100 nM. [2]
In vivo	**METHODS**: To assay in vivo ER stress-inducing activity, Thapsigargin (0.25-1 μg/g in 150 mM dextrose containing 1% DMSO) was administered as a single intraperitoneal injection to Balb/c mice in order. **RESULTS**: Thapsigargin treatment resulted in significant expression of the ER stress markers ATF6 and eIF2α in adipose tissue. thapsigargin treatment failed to induce the expression of most of the ER stress and UPR proteins in the liver. [2] **METHODS**: To investigate the antiviral function in vivo, Thapsigargin (30 ng/mouse) was administered by gavage to PR8 virus-infected BALB/c mice once daily for seven days. **RESULTS**: Oral administration of Thapsigargin to mice significantly reduced severity and viral shedding and improved survival during infection with the deadly influenza virus. [3]
Cell Research	Cell Line: MH7A human rheumatoid arthritis synovial cells. Concentration: 0.001, 0.1, and 1?μM. Incubation Time: For 2 and 4 days [2]
Animal Research	Animal Model: Male Balb/c mice (20-25g). Dosage: 0.25ug/g, 0.5ug/g and 1ug/g. Administration: Injection; 24 hours [4]

Solubility Information

Solubility	DMSO: 45 mg/mL (69.15 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5367 mL	7.6834 mL	15.3669 mL
5 mM	0.3073 mL	1.5367 mL	3.0734 mL
10 mM	0.1537 mL	0.7683 mL	1.5367 mL
50 mM	0.0307 mL	0.1537 mL	0.3073 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.

Reference

Shang Z, Zhang S, Wang J, et al.TRIM25 predominately associates with anti-viral stress granules.Nature Communications.2024, 15(1): 4127.