

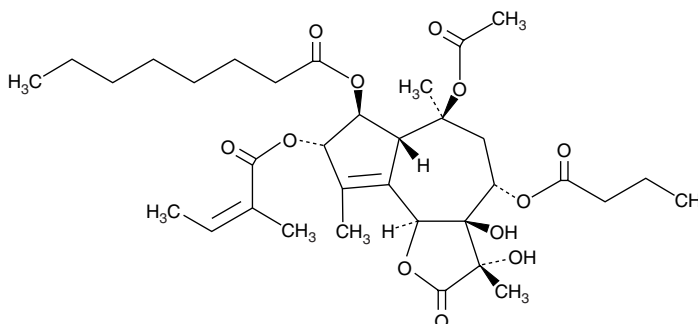
Product Information



Thapsigargin

Item No. 10522

CAS Registry No.: 67526-95-8
Formal Name: (3S,3aS,4R,6R,7S,8R)-6-acetoxy-4-(butyryloxy)-3,3a-dihydroxy-3,6,9-trimethyl-8-(((Z)-2-methylbut-2-enyl)oxy)-2-oxo-2,3,3a,4,5,6,6a,7,8,9b-decahydro-1H-cyclopenta[e]azulen-7-yl octanoate
MF: C₃₄H₅₀O₁₂
FW: 650.8
Purity: ≥97%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that thapsigargin be stored as supplied at -20°C. It should be stable for at least two years.

Thapsigargin is supplied as a crystalline solid. A stock solution may be made by dissolving the thapsigargin in the solvent of choice. Thapsigargin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of thapsigargin in these solvents is approximately 30 mg/ml.

Thapsigargin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, thapsigargin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Thapsigargin has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

In cells, sarco/endoplasmic calcium ATPases (SERCAs) transport free calcium into the sarcoplasmic and endoplasmic reticula, lowering intracellular calcium levels to stop signaling through this cation. Thapsigargin is a non-competitive, cell permeable inhibitor of calcium transport by SERCAs (IC₅₀ values are cell type-dependent and range from ~2-80 nM).^{1,2} Inhibition of SERCAs leads to an increase in intracellular calcium, which has been linked to cell activation, release of histamine from mast cells, and increased proliferation of certain types of cancer cells.^{1,3,4} *In vivo*, thapsigargin and related sesquiterpene lactones have anti-inflammatory and anti-cancer effects.^{5,6}

References

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Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10522

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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