LKT Laboratories, Inc.

Parthenolide

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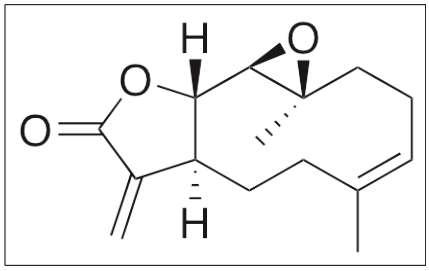
Product Information

Product ID P0270
CAS No. 20554-84-1
Chemical Name

Synonym



Formula $C_{15}H_{20}O_3$
Formula Wt. 248.32
Melting Point 112-115°C
Purity ≥98%
Solubility DMSO (100 mg/ml), Ethanol (20 mg/ml), Dichloromethane.

Bulk quanitites available upon request

Product ID	Size
P0270	25 mg
P0270	100 mg
P0270	250 mg

Store Temp 4°C
Ship Temp Ambient

Description Parthenolide is a sesquiterpene lactone found in *Tanacetum* that exhibits anticancer chemotherapeutic, anti-metastatic, anti-angiogenic, anti-inflammatory, and antinociceptive activities. Parthenolide acts as a partial agonist at transient receptor potential ankyrin 1 (TRPA1) channels and desensitizes them, preventing release of calcitonin gene-related peptide (CGRP). Additionally, parthenolide inhibits ATPase activity of NLRP3 and protease activity of caspase 1. In multiple myeloma cells, parthenolide decreases expression of NF-κB, VEGF, and IL-6 and increases expression of IκB kinase, inhibiting cell migration and tubule formation. In non-small cell lung cancer (NSCLC) cells, parthenolide decreases levels of MCL-1 and increases levels of MAIP-1, triggering ER stress and inducing cell cycle arrest and apoptosis. In breast cancer cells, this compound activates NADPH oxidase and increases ROS generation, increasing levels of p-JNK and downregulating NF-κB, VEGF, and matrix metalloproteinases 2 and 9 (MMP2/9); in vivo, parthenolide inhibits tumor growth and metastasis.

References

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Materazzi S, Benemei S, Fusi C, et al. Parthenolide inhibits nociception and neurogenic vasodilatation in the trigeminovascular system by targeting the TRPA1 channel. Pain. 2013 Dec;154(12):2750-8. PMID: 23933184.

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https://en.wikipedia.org/wiki/Parthenolide