



LKT Laboratories, Inc.

Betulinic Acid

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Product Information

Product ID B1979

CAS No. 472-15-1

Chemical Name

Synonym

Formula $C_{30}H_{48}O_3$

Formula Wt. 456.70

Melting Point 296 °C

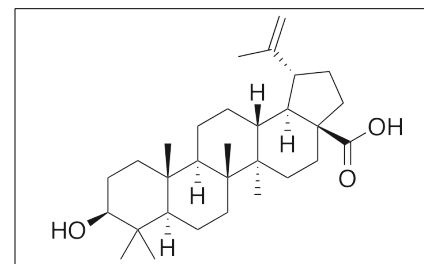
Purity ≥99%

Solubility Soluble in ethanol (0.5 mg/mL). Soluble in DMSO (20 mg/mL). Soluble in DMF (15 mg/mL). Slightly soluble in methanol.

Store Temp Ambient

Ship Temp Ambient

Description Betulinic acid is a pentacyclic triterpene that exhibits antithrombotic, anti-atherosclerotic, antioxidative, anti-inflammatory, anti-angiogenic, and anticancer chemotherapeutic properties. Betulinic acid decreases expression of P-selectin and binding of PAC-1, preventing platelet aggregation. In macrophages, betulinic acid inhibits phosphorylation of IκB and p65 and prevents activation of NF-κB, promoting cholesterol efflux and decreasing cellular levels of cholesterol; in vivo, this leads to a decrease in atherosclerotic lesion size. In rat aortic tissue, betulinic acid induced relaxation through preventing increases in ROS, decreases in NO, and decreases in eNOS and superoxide dismutase (SOD) activity induced by superoxide anions. In animal models, this compound increases activity of superoxide dismutase (SOD), glutathione peroxidase, and glutathione reductase and also decreases expression of cyclooxygenase (COX-2), NO, TNF-α, and IL-1β, resulting in a decrease in paw edema. In adenocarcinoma cells, this betulinic acid inhibits collagen biosynthesis, decreases prolidase activity, and decreases expression of HIF-1α, VEGF, and α1/2 integrins. Betulinic acid decreases expression of cyclin D3 and Bcl-xl in vitro, inducing cell cycle arrest and apoptosis. Additionally, this compound downregulates expression of Sp1 protein, decreasing lung tumor growth in animal models.



Bulk quantities available upon request

Product ID	Size
B1979	10 mg
B1979	50 mg
B1979	250 mg

References Zhao GJ, Tang SL, Lv YC, et al. Antagonism of Betulinic Acid on LPS-Mediated Inhibition of ABCA1 and Cholesterol Efflux through Inhibiting Nuclear Factor-kappaB Signaling Pathway and miR-33 Expression. *PLoS One*. 2013 Sep 25;8(9):e74782. PMID: 24086374.

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Karna E, Szoka L, Palka JA. Betulinic acid inhibits the expression of hypoxia-inducible factor 1α and vascular endothelial growth factor in human endometrial adenocarcinoma cells. *Mol Cell Biochem*. 2010 Jul;340(1-2):15-20. PMID: 20174965.

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Caution: This product is intended for laboratory and research use only. It is not for human or drug use.