



LKT Laboratories, Inc.

Piperlonguminine

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Product Information

Product ID P3563

CAS No. 5950-12-9

Chemical Name (2E, 4E)-5-Benzo[d][1,3]-dioxol-5-yl)-N-isobutylpenta-2,4-dienamide

Synonym

Formula $C_{16}H_{19}NO_3$

Formula Wt. 273.33

Melting Point 168-169°C

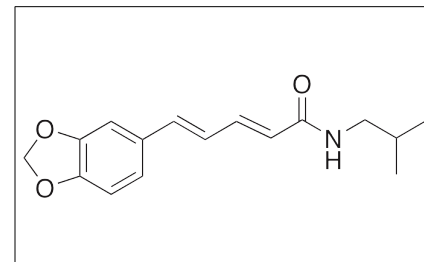
Purity ≥99%

Solubility DMSO

Store Temp -20°C

Ship Temp Ambient

Description Piperlonguminine is found in several species of the *Piper* plant and displays many beneficial characteristics, including antithrombotic, anti-inflammatory, anti-hyperlipidemic, antibacterial, anti-parasitic, antifungal, neuroprotective, and anticancer chemotherapeutic activities. In animal models, piperlonguminine inhibits generation of factor Xa and thrombin and production of TNF- α -induced plasminogen activator inhibitor type 1 (PAI-1), increasing bleeding time. This compound decreases PMA-stimulated phosphorylation or activation of NF- κ B, p38, ERK1/2, and JNK and also decreases levels of IL-6 and TNF- α . In other animal studies, piperlonguminine increases LDL receptor mRNA and decreases total serum cholesterol (including an increase in HDL and decreases in LDL and triglyceride levels). Piperlonguminine also promotes adipogenesis, increasing mRNA levels of adiponectin, glutamate transporter 4 (GLUT4), fatty acid binding protein aP2, and PPAR γ in vitro. This compound displays cytotoxicity against gram-positive bacteria (*Bacillus*), parasites (*Trypanosoma cruzi*), and fungus (*Candida*). Piperlonguminine decreases levels of amyloid-B (AB) and amyloid precursor protein (APP) in vitro, suggesting potential benefit in the treatment of Alzheimer's disease. Additionally, piperlonguminine decreases tumor growth in animal models.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
P3563	10 mg	\$64.20
P3563	25 mg	\$121.30
P3563	100 mg	\$356.80

References Lee W, Yoo H, Ku SK, et al. Anticoagulant activities of piperlonguminine in vitro and in vivo. *BMB Rep.* 2013 Oct;46(10):484-9. PMID: 24148768.

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Lee W, Yoo H, Kim JA, et al. Barrier protective effects of piperlonguminine in LPS-induced inflammation in vitro and in vivo. *Food Chem Toxicol.* 2013 Aug;58:149-57. PMID: 23619565.

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Bao L, Borjihan G. Hypolipidemic effects of piperlonguminine in HepG2 cells and in Wistar rats. *Pharmazie.* 2012 Oct;67(10):858-61. PMID: 23136721.

Qi HS, Liu P, Gao SQ, et al. Inhibitory effect of piperlonguminine/ dihydropiperlonguminine on the production of amyloid beta and APP in SK-N-SH cells. *Chin J Physiol.* 2009 Jun 30;52(3):160-8. PMID: 19777802.

Silva DR, Endo EH, Filho BP, et al. Chemical Composition and Antimicrobial Properties of Piper ovatum Vahl. *Molecules.* 2009

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