LKT Laboratories, Inc.

Andrographolide

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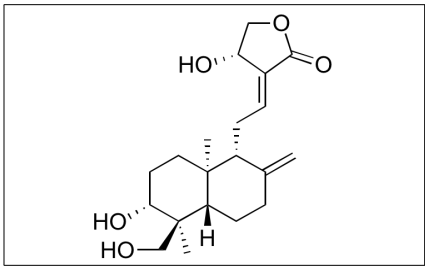
Product Information

Product ID A5313
CAS No. 5508-58-7
Chemical Name [1R-[1α[E(S*)],4ab,5α,6α,8aα]]-3-[2-[Decahydro-6- hydroxy-5-(hydroxymethyl)-5,8a-dimethyl-2- methylene-1-naphthalenyl] ethylidene]dihydro-4- hydroxy-2(3H)-furanone
Synonym Andrographis



Formula $C_{20}H_{30}O_5$
Formula Wt. 350.45
Melting Point 218-221°C
Purity ≥98%
Solubility Soluble in methanol, acetone, chloroform or ether. Slightly soluble in water.
Store Temp -20°C
Ship Temp Ambient

Bulk quanitites available upon request

Product ID	Size
A5313	10 mg
A5313	100 mg
A5313	250 mg
A5313	1 g

Description Andrographolide is a labdane diterpene found in *Andrographis* that exhibits antioxidative, antiviral, anti-inflammatory, anti-diabetic, immunomodulatory, anti-metastatic, and anticancer activities. In vitro, andrographolide decreases TNF-α-induced generation of ROS and expression of ICAM-1 and increases levels of glutathione and heme oxygenase 1 (HO-1). Andrographolide also decreases influenza-induced cell mortality in vitro by inhibiting activation of RIG1-like receptors (RLRs). Additionally, andrographolide suppresses development of diabetes in vivo by decreasing expression of IL-2, IL-17, and IFN-γ and increasing expression of IL-10 and TGF-β. This compound also decreases production of NO, PGE2, iNOS, TNF-α, COX-2, and IFN-β in LPS-stimulated macrophages. In leukemia cells, andrographolide inhibits HSP90 activity, decreases Bcr-Abl levels, and induces apoptosis.

References

Lu CY, Yang YC, Li CC, et al. Andrographolide inhibits TNFα-induced ICAM-1 expression via suppression of NADPH oxidase activation and induction of HO-1 and GCLM expression through the PI3K/Akt/Nrf2 and PI3K/Akt/AP-1 pathways in human endothelial cells. Biochem Pharmacol. 2014 Sep 1;91(1):40-50. PMID: 24998495.

Yu B, Dai CQ, Jiang ZY, et al. Andrographolide as an anti-H1N1 drug and the mechanism related to retinoic acid-inducible gene-I-like receptors signaling pathway. Chin J Integr Med. 2014 Jul;20(7):540-5. PMID: 24972581.

Wang J, Tan XF, Nguyen VS, et al. A quantitative chemical proteomics approach to profile the specific cellular targets of andrographolide, a promising anticancer agent that suppresses tumor metastasis. Mol Cell Proteomics. 2014 Mar;13(3):876-86. PMID: 24445406.

Liu SH, Lin CH, Liang FP, et al. Andrographolide downregulates the v-Src and Bcr-Abl oncoproteins and induces Hsp90 cleavage in the ROS-dependent suppression of cancer malignancy. Biochem Pharmacol. 2014 Jan 15;87(2):229-42. PMID: 24161787.

Shen T, Yang WS, Yi YS, et al. AP-1/IRF-3 Targeted Anti-Inflammatory Activity of Andrographolide Isolated from Andrographis paniculata. Evid Based Complement Alternat Med. 2013;2013:210736. PMID: 23840248.

Zhang C, Gui L, Xu Y, et al. Preventive effects of andrographolide on the development of diabetes in autoimmune diabetic NOD mice by inducing immune tolerance. Int Immunopharmacol. 2013 Aug;16(4):451-6. PMID: 23707775.