

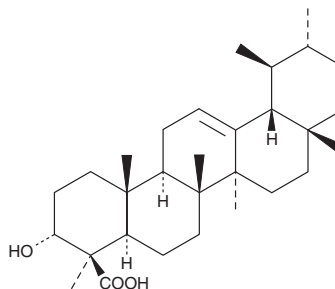
PRODUCT INFORMATION



β-Boswellic Acid

Item No. 11693

CAS Registry No.: 631-69-6
Formal Name: (3α,4β)-3-hydroxy-urs-12-en-23-oic acid
MF: C₃₀H₄₈O₃
FW: 456.7
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years
Item Origin: Plant/*Boswellia serrata*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

β-Boswellic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the β-boswellic acid in the solvent of choice. β-Boswellic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of β-boswellic acid in ethanol is approximately 5 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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

Description

β-Boswellic acid is a pentacyclic triterpene originally isolated from *Boswellia* that has diverse bioactivities.¹ It inhibits 5-lipoxygenase (5-LO) with an IC₅₀ value of approximately 5 μM but is less potent than its derivative 3-acetyl-11-keto-β-boswellic acid (Item No. 11672).² It inhibits cell proliferation in HL-60 cells with IC₅₀ values of 3.7, 7.1, and 6.3 μM for DNA, RNA, and protein synthesis, respectively.³ In human umbilical vein endothelial cells (HUVECs) transiently deprived of oxygen and glucose, β-boswellic acid increases nitric oxide and increases phosphorylation of enzyme nitric oxide synthase (eNOS).⁴ It also increases calcium mobilization in platelets at concentrations ≥3 μM and induces platelet aggregation (EC₅₀ = 8 μM).⁵

References

1. Ammon, H.P., Safayhi, H., Mack, T., *et al.* Mechanism of antiinflammatory actions of curcumine and boswellic acids. *J. Ethnopharmacol.* **38(2-3)**, 113-119 (1993).
2. Safayhi, H., Mack, T., Sabieraj, J., *et al.* Boswellic acids: Novel, specific, nonredox inhibitors of 5-lipoxygenase. *J. Pharmacol. Exp. Ther.* **261(3)**, 1143-1146 (1992).
3. Shao, Y., Ho, C.-T., Chin, C.-K., *et al.* Inhibitory activity of boswellic acids from *Boswellia serrata* against human leukemia HL-60 cells in culture. *Planta Med.* **64(4)**, 328-331 (1998).
4. Wang, M., Chen, M., Ding, Y., *et al.* Pretreatment with β-boswellic acid improves blood stasis induced endothelial dysfunction: Role of eNOS activation. *Sci. Rep.* **5:15357** (2015).
5. Siemoneit, U., Tausch, L., Poeckel, D., *et al.* Defined structure-activity relationships of boswellic acids determine modulation of Ca²⁺ mobilization and aggregation of human platelets by *Boswellia serrata* extracts. *Planta Med.* **83(12-13)**, 1020-1027 (2017).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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