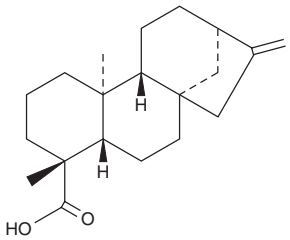
PRODUCT INFORMATION

Kaurenoic Acid

Item No. 28957

CAS Registry No.: 6730-83-2
Formal Name: (4α)-kaur-16-en-18-oic acid
MF: $C_{20}H_{30}O_2$
FW: 302.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Acanthopanax gracilistylus*



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

Laboratory Procedures

Kaurenoic acid is supplied as a solid. A stock solution may be made by dissolving the kaurenoic acid in the solvent of choice, which should be purged with an inert gas. Kaurenoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of kaurenoic acid in ethanol and DMF is approximately 10 mg/ml and approximately 25 mg/ml in DMSO.

Kaurenoic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, kaurenoic acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Kaurenoic 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

Kaurenoic acid is a diterpene that has been found in *C. langsdorffii* and has diverse biological activities, including anticancer, antibacterial, antioxidant, and anti-inflammatory properties.[1-3] It is cytotoxic to 22Rv1 and LNCaP prostate, HT-29, HCT116, SW480, and SW620 colon, and MCF-7 breast cancer cells with IC_{50} values ranging from 15.03 to 48.87 µg/ml.[2] Kaurenoic acid is active against *S. epidermidis*, *S. capitis*, *E. faecalis*, and *S. haemolyticus in vitro* (MICs = 6.25-12.5 µg/ml).[3] Kaurenoic acid (50 and 100 mg/kg) reduces colonic myeloperoxidase (MPO) activity and malondialdehyde (MDA) levels in a rat model of acetic acid-induced colitis, as well as colonic tissue damage, leukocytic infiltration, and submucosal edema when administered at a dose of 100 mg/kg.[1]

References

1. Paiva, L.A.F., Gurgel, L.A., Silva, R.M., *et al.* Anti-inflammatory effect of kaurenoic acid, a diterpene from *Copaifera langsdorffi* on acetic acid-induced colitis in rats. *Vascul. Pharmacol.* **39(6)**, 303-307 (2003).
2. Henry, G.E., Adams, L.S., Rosales, J.C., *et al.* Kaurene diterpenes from *Laetia thamnia* inhibit the growth of human cancer cells in vitro. *Cancer Lett.* **244(2)**, 190-194 (2006).
3. Soares, A.C.F., Matos, P.M., Dias, H.J., *et al.* Variability of the antibacterial potential among analogue diterpenes against Gram-positive bacteria: Considerations on structure-activity subject. *Can. J. Chem.* **97(7)**, 568-575 (2019).

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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