

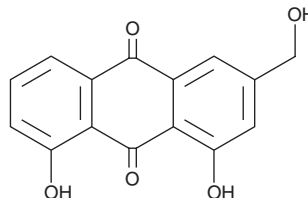
PRODUCT INFORMATION



Aloe-emodin

Item No. 11677

CAS Registry No.: 481-72-1
Formal Name: 1,8-dihydroxy-3-(hydroxymethyl)-9,10-anthracenedione
Synonyms: 3-Hydroxymethylchrysazine, NSC 38628, Rhabarberone
MF: C₁₅H₁₀O₅
FW: 270.2
Purity: ≥95%
UV/Vis.: λ_{max}: 225, 255, 285, 430 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Aloe barbadensis*



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

Laboratory Procedures

Aloe-emodin is supplied as a crystalline solid. A stock solution may be made by dissolving the aloe-emodin in the solvent of choice, which should be purged with an inert gas. Aloe-emodin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of aloe-emodin in these solvents is approximately 2 and 5 mg/ml, respectively.

Description

Aloe-emodin is a hydroxyanthraquinone found in *Aloe vera* leaves that has potent laxative action by inducing chloride secretion in colonic mucosa and releasing acetylcholine, which stimulates contraction of intestinal smooth muscle.¹ It also demonstrates anti-tumor activity (ED₅₀s = 1-13 μM), inducing apoptosis in various cancer cells by increasing the production of reactive oxygen species.^{2,3} Aloe-emodin is reported to have estrogenic activity as a phytoestrogen and has been shown to inhibit breast cancer cell proliferation by downregulating ERα protein levels, and thus, suppressing transcriptional activation of the receptor.^{4,5}

References

- Xu, J.-D., Liu, S., Wang, W., *et al.* Emodin induces chloride secretion in rat distal colon through activation of mast cells and enteric neurons. *Br. J. Pharmacol.* **165**(1), 197-207 (2012).
- Xie, M.-J., Ma, Y.-H., Miao, L., *et al.* Emodin-provoked oxidative stress induces apoptosis in human colon cancer HCT116 cells through a p53-mitochondrial apoptotic pathway. *Asian Pac. J. Cancer Prev.* **15**(13), 5201-5205 (2014).
- Pecere, T., Gazzola, M.V., Mucignat, C., *et al.* Aloe-emodin is a new type of anticancer agent with selective activity against neuroectodermal tumors. *Cancer Res.* **60**(11), 2800-2804 (2000).
- Matsuda, H., Shimoda, H., Morikawa, T., *et al.* Emodin and aloe-emodin suppress breast cancer cell proliferation through ERα inhibition. *Bioorg. Med. Chem. Lett.* **11**(14), 1839-1842 (2001).
- Huang, P.-H., Huang, C.-Y., Chen, M.-C., *et al.* Emodin and aloe-emodin suppress breast cancer cell proliferation through ERα inhibition. *Evid. Based Complement. Alternat. Med.* **2013**, 1-12 (2013).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/21/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM