

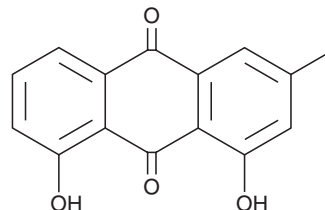
PRODUCT INFORMATION



Chrysophanol

Item No. 19870

CAS Registry No.: 481-74-3
Formal Name: 1,8-dihydroxy-3-methyl-9,10-anthracenedione
Synonyms: Chrysophanic Acid, NSC 37132, NSC 646567, Turkey Rhubarb
MF: C₁₅H₁₀O₄
FW: 254.2
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 257, 277, 287, 428 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Rheum palmatum*



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

Laboratory Procedures

Chrysophanol is supplied as a crystalline solid. A stock solution may be made by dissolving the chrysophanol in the solvent of choice, which should be purged with an inert gas. Chrysophanol is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of chrysophanol in these solvents is approximately 0.2 and 0.5 mg/ml, respectively.

Description

Chrysophanol is an anthraquinone that has been found in *R. palmatum* and has diverse biological activities.¹⁻³ It induces necrosis in J5 human liver cancer cells when used at concentrations of 25, 50, 75, 100, and 200 μM.² Chrysophanol (5, 10, and 50 μM) reduces LPS-induced production of nitric oxide (NO) and prostaglandin E₂ (PGE₂; Item No. 14010) and inhibits LPS-induced DNA oxidation in BV-2 microglia.³ *In vivo*, chrysophanol (5 mg/kg) decreases colonic levels of IL-6 and activation of NF-κB and reduces weight loss, diarrhea, and rectal bleeding in a mouse model of colitis induced by dextran sulfate (DSS; Item No. 23250).⁴ Chrysophanol (0.1, 1, and 10 mg/kg) increases survival, reduces brain tissue loss, and ameliorates motor balance deficits in a mouse model of ischemia-reperfusion injury induced by middle cerebral artery occlusion (MCAO).⁵

References

1. Qi, F.H., Wang, Z.X., Cai, P.P., *et al.* Traditional Chinese medicine and related active compounds: A review of their role on hepatitis B virus infection. *Drug Discov. Ther.* **7(6)**, 212-224 (2013).
2. Lu, C.-C., Yang, J.-S., Huang, A.-C., *et al.* Chrysophanol induces necrosis through the production of ROS and alteration of ATP levels in J5 human liver cancer cells. *Mol. Nutr. Food Res.* **54(7)**, 967-976 (2010).
3. Lin, F., Zhang, C., Chen, X., *et al.* Chrysophanol affords neuroprotection against microglial activation and free radical-mediated oxidative damage in BV2 murine microglia. *Int. J. Clin. Exp. Med.* **8(3)**, 3447-3455 (2015).
4. Kim, S.-J., Kim, M.-C., Lee, B.-J., *et al.* Anti-inflammatory activity of chrysophanol through the suppression of NF-κB/caspase-1 activation *in vitro* and *in vivo*. *Molecules* **15(9)**, 6436-6451 (2010).
5. Zhao, Y., Fang, Y., Li, J., *et al.* Neuroprotective effects of chrysophanol against inflammation in middle cerebral artery occlusion mice. *Neurosci. Lett.* **630**, 16-22 (2016).

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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