

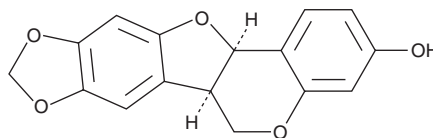
PRODUCT INFORMATION



Maackiain

Item No. 40215

CAS Registry No.: 2035-15-6
Formal Name: 6aR,12aR-dihydro-6H-[1,3]dioxolo[5,6]benzofuro[3,2-c][1]benzopyran-3-ol
Synonyms: (-)-Maackiain, Trifolirhizin aglycone
MF: C₁₆H₁₂O₅
FW: 284.3
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Sophora flavescens* Ait.



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

Laboratory Procedures

Maackiain is supplied as a solid. A stock solution may be made by dissolving the maackiain in the solvent of choice, which should be purged with an inert gas. Maackiain is soluble in acetonitrile and chloroform.

Description

Maackiain is a cyclized isoflavonoid that has been found in *S. flavescens* and has anti-inflammatory and antiallergenic activities.¹⁻³ It inhibits increases in the levels of mRNA encoding the histamine H₁ receptor induced by phorbol 12-myristate 13-acetate (PMA; Item No. 10008014) in serum-starved HeLa cells when used at concentrations of 10, 20, or 30 μM and inhibits PMA-induced increases in the levels of mRNA encoding Il-4 in RBL-2H3 cells at 50 or 150 μM.² Maackiain decreases LPS-induced increases in nitric oxide (NO) production in RAW 264.7 macrophages (IC₅₀ = 27 μM).³ It increases survival in a mouse model of sepsis induced by cecal ligation and puncture (CLP) when administered at doses of 2.5 or 5 mg/kg.¹ Maackiain (20 mg/kg per day) reduces the number of sneezes and the extent of nasal redness, swelling, and watery rhinorrhea in a rat model of allergies induced by toluene-2,4-diisocyanate (TDI).⁵

References

1. Bai, X., Zhu, Y., Jie, J., *et al.* Maackiain protects against sepsis via activating AMPK/Nrf2/HO-1 pathway. *Int. Immunopharmacol.* **108**, 108710 (2022).
2. Mizuguchi, H., Nariai, Y., Kato, S., *et al.* Maackiain is a novel antiallergic compound that suppresses transcriptional upregulation of the histamine H₁ receptor and interleukin-4 genes. *Pharmacol. Res. Perspect.* **3**(5), e00166 (2015).
3. Lee, J.W., Lee, J.H., Lee, C., *et al.* Inhibitory constituents of *Sophora tonkinensis* on nitric oxide production in RAW 264.7 macrophages. *Bioorg. Med. Chem. Lett.* **25**(4), (2015).

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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