

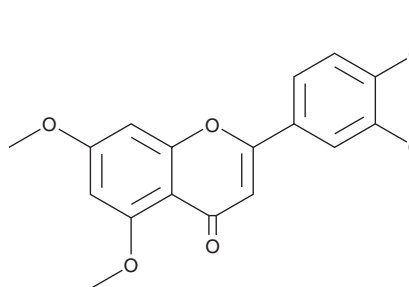
PRODUCT INFORMATION



5,7,3',4'-Tetramethoxyflavone

Item No. 40272

CAS Registry No.: 855-97-0
Formal Name: 2-(3,4-dimethoxyphenyl)-5,7-dimethoxy-4H-1-benzopyran-4-one
Synonyms: 5,7,3',4'-tetramethyl Luteolin ether, Methoxyluteolin, Tetramethyl camphoral
MF: C₁₉H₁₈O₆
FW: 342.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

5,7,3',4'-Tetramethoxyflavone is supplied as a solid. A stock solution may be made by dissolving the 5,7,3',4'-tetramethoxyflavone in the solvent of choice, which should be purged with an inert gas. 5,7,3',4'-Tetramethoxyflavone is soluble in methanol and DMSO.

Description

5,7,3',4'-Tetramethoxyflavone is a flavone that has been found in *M. paniculata* and has diverse biological activities.¹⁻⁶ It selectively inhibits multidrug resistance-associated protein 1 (MRP1) over MRP2 (IC₅₀s = 7.9 and >50 μM, respectively).¹ 5,7,3',4'-Tetramethoxyflavone (0.03-30 μM) inhibits LPS-induced nitric oxide (NO) release in primary mouse peritoneal macrophages.² It is active against *P. falciparum* (IC₅₀ = 4.06 μg/ml).³ 5,7,3',4'-Tetramethoxyflavone (20 μM) is cytotoxic to B16/F10 melanoma cells.⁴ It inhibits IL-33-induced production of chemokine (C-C motif) ligand 2 (CCL2) and CCL5 in primary human mast cells when used at concentrations of 50 and 100 μM.⁵ *In vivo*, 5,7,3',4'-tetramethoxyflavone (100 mg/kg) decreases the synovial fluid levels of prostaglandin E₂ (PGE₂; Item No. 14010), IL-1β, and TNF-α in a rat model of surgically induced osteoarthritis.⁶

References

1. van Zanden, J.J., Wortelboer, H.M., Bijlsma, S., *et al.* Quantitative structure activity relationship studies on the flavonoid mediated inhibition of multidrug resistance proteins 1 and 2. *Biochem. Pharmacol.* **69(4)**, 699-708 (2005).
2. Wu, J., Liu, K., and Shi, X. The anti-inflammatory activity of several flavonoids isolated from *Murraya paniculata* on murine macrophage cell line and gastric epithelial cell (GES-1). *Pharm. Biol.* **54(5)**, 868-881 (2016).
3. Yenjai, C., Prasanphen, K., Daodee, S., *et al.* Bioactive flavonoids from *Kaempferia parviflora*. *Fitoterapia* **75(1)**, 89-92 (2004).
4. Jung, S.-H., Heo, H.-Y., Choe, J.-W., *et al.* Anti-melanogenic properties of velutin and its analogs. *Molecules* **26(10)**, 3033 (2021).
5. Bawazeer, M.A. and Theoharides, T.C. IL-33 stimulates human mast cell release of CCL5 and CCL2 via MAPK and NF-κB, inhibited by methoxyluteolin. *Eur. J. Pharmacol.* **865**, 172760 (2019).
6. Wu, L., Liu, H., Li, L., *et al.* 5,7,3',4'-Tetramethoxyflavone exhibits chondroprotective activity by targeting β-catenin signaling *in vivo* and *in vitro*. *Biochem. Biophys. Res. Commun.* **452(3)**, 682-688 (2014).

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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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