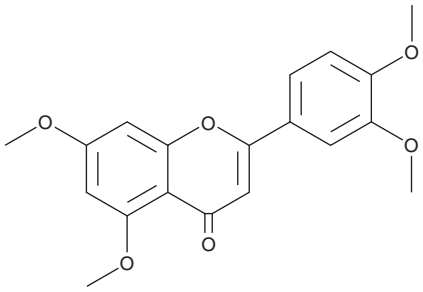
PRODUCT INFORMATION

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:	$C_{19}H_{18}O_6$
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 (IC_{50}s = 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* (IC_{50} = 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 E_2 (PGE_2; Item No. 14010), IL-1β, and TNF-α in a rat model of surgically induced osteoarthritis.[6]

References

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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).

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