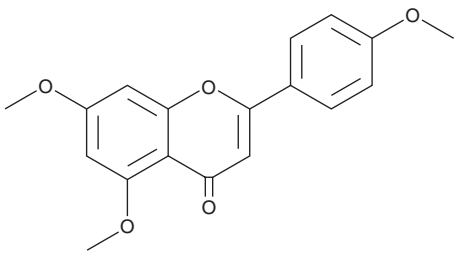
PRODUCT INFORMATION

4',5,7-Trimethoxyflavone

Item No. 40271

CAS Registry No.:	5631-70-9
Formal Name:	5,7-dimethoxy-2-(4-methoxyphenyl)-4H-1-benzopyran-4-one
Synonyms:	5,7,4'-Trimethoxyflavone, Trimethylapigenin, Tri-O-methylapigenin
MF:	$C_{18}H_{16}O_5$
FW:	312.3
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

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

Description

4',5,7-Trimethoxyflavone is a flavonoid that has been found in *K. parviflora* and has diverse biological activities.[1-3] It inhibits acetylcholinesterase (AChE) and butyrylcholinesterase (BChE) by 47.1 and 46.2%, respectively, in a cell-free assay when used at a concentration of 0.1 mg/ml.[1] 4',5,7-Trimethoxyflavone (1 and 10 µM) scavenges radicals in a Trolox equivalent antioxidant capacity (TEAC) assay.[2] It inhibits RANKL-induced osteoclastic differentiation of RAW 264.7 cells when used at a concentration of 10 µM. 4',5,7-Trimethoxyflavone stimulates chloride secretion in Calu-3 human airway epithelial cells, which endogenously express cystic fibrosis transmembrane conductance regulator (CFTR) as their major apical chloride channel.[3]

References

1. Sawasdee, P., Sabphon, C., Sitthiwongwanit, D., *et al.* Anticholinesterase activity of 7-methoxyflavones isolated from *Kaempferia parviflora*. *Phytother. Res.* **23(12)**, 1792-1794 (2009).
2. Thao, N.P., Luyen, B.T.T., Lee, S.H., *et al.* Anti-osteoporotic and antioxidant activities by rhizomes of *Kaempferia parviflora* Wall. ex Baker. *Nat. Prod. Sci.* **22(1)**, 13-19 (2016).
3. Fischer, H. and Illek, B. Activation of the CFTR Cl- channel by trimethoxyflavone in vitro and in vivo. *Cell. Physiol. Biochem.* **22(5-6)**, 685-692 (2008).

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