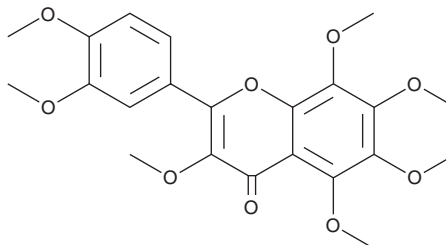


PRODUCT INFORMATION

3,5,6,7,8,3',4'-Heptamethoxyflavone

Item No. 36475

CAS Registry No.: 1178-24-1
Formal Name: 2-(3,4-dimethoxyphenyl)-3,5,6,7,8-pentamethoxy-H-1-benzopyran-4-one
Synonyms: HMF, NSC 618928
MF: C₂₂H₂₄O₉
FW: 432.4
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/Citrus sp.



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

Laboratory Procedures

3,5,6,7,8,3',4'-Heptamethoxyflavone (HMF) is supplied as a solid. A stock solution may be made by dissolving the HMF in the solvent of choice, which should be purged with an inert gas. HMF is soluble in methanol and DMSO.

Description

HMF is a polymethoxyflavone that has been found in *C. reticulata* and has diverse biological activities.¹⁻⁴ It inhibits the efflux of Hoechst 33342 (Item No. 15547) by breast cancer resistance protein (BCRP) and rhodamine 123 (Item No. 16672) by P-glycoprotein (P-gp), also known as multidrug resistance protein 1 (MDR1), in MDCK cells expressing the human transporters (IC₅₀s = 1.4 and 31 μM, respectively).¹ HMF (50, 100, and 200 μg/ml) prevents UVB-induced decreases in type I procollagen in primary human dermal fibroblast neonatal (HDFn) cells.² It inhibits the proliferation of B16 melanoma 4A5, CCRF-HSB-2 leukemia, and TGBC11TKB gastric cancer cells (IC₅₀s = 38, 29, and 9 μM, respectively).³ HMF (50 mg/kg) prevents corticosterone-induced increases in immobility time in the forced swim test in mice.⁴

References

- Pick, A., Müller, H., Mayer, R., *et al.* Structure-activity relationships of flavonoids as inhibitors of breast cancer resistance protein (BCRP). *Bioorg. Med. Chem.* **19**(6), 2090-2102 (2011).
- Kim, H.-I., Jeong, Y.-U., Kim, J.-H., *et al.* 3,5,6,7,8,3',4'-Heptamethoxyflavone, a *Citrus* flavonoid, inhibits collagenase activity and induces type I procollagen synthesis in HDFn cells. *Int. J. Mol. Sci.* **19**(2), 620 (2018).
- Kawaii, S., Tomono, Y., Katase, E., *et al.* Antiproliferative activity of flavonoids on several cancer cell lines. *Biosci. Biotechnol. Biochem.* **63**(5), 896-899 (1999).
- Sawamoto, A., Okuyama, S., Yamamoto, K., *et al.* 3,5,6,7,8,3',4'-Heptamethoxyflavone, a citrus flavonoid, ameliorates corticosterone-induced depression-like behavior and restores brain-derived neurotrophic factor expression, neurogenesis, and neuroplasticity in the hippocampus. *Molecules* **21**(4), 541 (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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