PRODUCT INFORMATION



Kaempferide

Item No. 29673

CAS Registry No.:	491-54-3
Formal Name:	3,5,7-trihydroxy-2-(4-methoxyphenyl)-4H-1-
	benzopyran-4-one
Synonyms:	Kaempferol 4'-O-methyl ether, NSC 407294,
	3,5,7-Trihydroxy-4'-methoxyflavone
MF:	$C_{16}H_{12}O_6$
FW:	300.3
Purity:	≥95% HO O Y
UV/Vis.:	λ _{max} : 267, 321, 363 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic
1 6 11	

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

Laboratory Procedures

Kaempferide is supplied as a solid. A stock solution may be made by dissolving the kaempferide in the solvent of choice, which should be purged with an inert gas. Kaempferide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of kaempferide in these solvents is approximately 3, 10, and 2 mg/ml, respectively.

Kaempferide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, kaempferide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Kaempferide has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Kaempferide is a flavonoid that has been found in Alpinia and has diverse biological activities.¹⁻⁴ It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals in a cell-free assay $(IC_{50} = 97.58 \ \mu g/ml)$.¹ Kaempferide is cytotoxic to HT-1080 and Colon 26-L5 cells (EC₅₀s = 2.91 and 5.95 $\mu g/ml$, respectively) and decreases lipid accumulation in 3T3-L1 preadipocytes when used at a concentration of 50 µM.^{2,3} It attenuates decreases in left ventricular systolic pressure (LVSP) and increases in left ventricular end-diastolic pressure (LVEDP) and reduces infarct size in a rat model of myocardial ischemia-reperfusion injury induced by coronary artery ligation when administered at doses of 0.3 and 1 mg/kg.⁴

References

- 1. Bian, Q.-Y., Wang, S.-Y., Xu, L.-J., et al. Two new antioxidant diarylheptanoids from the fruits of Alpinia oxyphylla. J. Asian Nat. Prod. Res. 15(10), 1094-1099 (2013).
- 2. Banskota, A.H., Tezuka, Y., Prasain, J.K., et al. Chemical constituents of brazilian propolis and their cytotoxic activities. J. Nat. Prod. 61(7), 896-900 (1998).
- Kumkarnjana, S., Suttisri, R., Nimmannit, U., et al. Anti-adipogenic effect of flavonoids from 3. Chromolaena odorata leaves in 3T3-L1 adipocytes. J. Integr. Med. 16(6), 427-434 (2018).
- 4. Wang, D., Zhang, X., Li, D., et al. Kaempferide protects against myocardial ischemia/reperfusion injury through activation of the PI3K/Akt/GSK-3 β pathway. Mediators Inflamm. 5278218 (2017).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY 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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