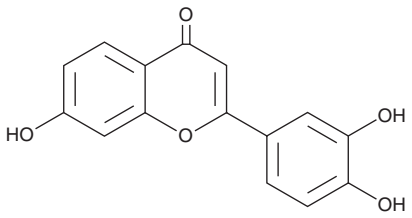
PRODUCT INFORMATION

7,3',4'-Trihydroxyflavone

Item No. 29880

CAS Registry No.:	2150-11-0
Formal Name:	2-(3,4-dihydroxyphenyl)-7-hydroxy-4H-1-benzopyran-4-one
Synonyms:	3',4',7-Trihydroxyflavone, 5-Deoxyluteolin
MF:	$C_{15}H_{10}O_5$
FW:	270.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 238, 343 nm
Supplied as:	A crystalline 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

7,3',4'-Trihydroxyflavone is supplied as a crystalline solid. A stock solution may be made by dissolving the 7,3',4'-trihydroxyflavone in the solvent of choice, which should be purged with an inert gas. 7,3',4'-Trihydroxyflavone is soluble in DMSO and DMF. The solubility of 7,3',4'-trihydroxyflavone in these solvents is 5 mg/ml.

Description

7,3',4'-Trihydroxyflavone is a flavonoid that has been found in *A. julibrissin* bark and has diverse biological activities.[1-4] It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) and peroxynitrite radicals in cell-free assays (IC_{50}s = 2.2 and 5.78 µM, respectively), as well as reduces total reactive oxygen species in rat kidney homogenates (IC_{50} = 3.9 µM).[1] 7,3',4'-Trihydroxyflavone inhibits COX-1 (IC_{50} = 36.7 µM).[2] It is active against *M. tuberculosis* (MIC = 50 µg/ml).[4] It decreases mRNA expression of the osteoclastic marker genes encoding the calcitonin receptor, cathepsin K1 V-ATPase V0 subunit d2 (Atp6v0d2), and dendritic cell specific transmembrane protein (Dcstamp) in and inhibits RANKL-induced osteoclastic differentiation of mouse bone marrow-derived macrophages (BMDMs).[4]

References

1. Jung, M.J., Chung, H.Y., Kang, S.S., *et al*. Antioxidant activity from the stem bark of *Albizzia julibrissin* *Arch. Pharm. Res.* **26(6)**, 458-462 (2003).
2. Selvam, C., Jachak, S.M., and Bhutani, K.K. Cyclooxygenase inhibitory flavonoids from the stem bark of *Semecarpus anacardium* Linn. *Phytother. Res.* **18(7)**, 582-584 (2004).
3. Chokchaisiri, R., Suaisom, C., Sriphota, S., *et al*. Bioactive flavonoids of the flowers of *Butea monosperma*. *Chem. Pharm. Bull. (Tokyo)* **57(4)**, 428-432 (2009).
4. Kang, J.H., Lee, J., Moon, M., *et al*. 3'4'7-Trihydroxyflavone inhibits RANKL-induced osteoclast formation via NFATc1. *Pharmazie* **70(10)**, 661-667 (2015).

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