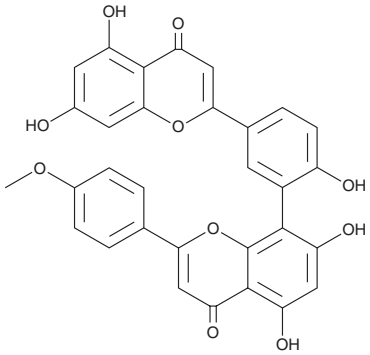
PRODUCT INFORMATION

Podocarpusflavone A

Item No. 34613

CAS Registry No.:	22136-74-9
Formal Name:	8-[5-(5,7-dihydroxy-4-oxo-4H-1-benzopyran-2-yl)-2-hydroxyphenyl]-5,7-dihydroxy-2-(4-methoxyphenyl)-4H-1-benzopyran-4-one
Synonym:	PCFA
MF:	$C_{31}H_{20}O_{10}$
FW:	552.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 272, 334 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Selaginella*



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

Laboratory Procedures

Podocarpusflavone A is supplied as a solid. A stock solution may be made by dissolving the podocarpusflavone A in the solvent of choice, which should be purged with an inert gas. Podocarpusflavone A is soluble in ethanol and DMSO.

Description

Podocarpusflavone A is a biflavone that has been found in *D. araucarioides* and has diverse biological activities.[1-4] It inhibits dengue virus NS5 RNA-dependent RNA polymerase (DENV-NS5 RdRp; IC_{50} = 0.75 µM).[3] Podocarpusflavone A also inhibits cathepsin B with an IC_{50} value of 1.68 µM and inhibits STAT3 in a reporter assay in a concentration-dependent manner.[1,2] It reduces the production of reactive oxygen species (ROS) and superoxide anions induced by phorbol 12-myristate 13-acetate (PMA; Item No. 10008014) in isolated human neutrophils when used at concentrations of 1 and 10 µM, respectively.[4] Podocarpusflavone A also inhibits aggregation of amyloid-β (1-40) peptide (Aβ40; Item No. 21617) in a cell-free assay with an IC_{50} value of 4.9 µM.[5] Podocarpusflavone A (20 µM) decreases viability of A375, MALME-3M, SK-MEL-1, and SK-MEL-5 melanoma cells and reduces tumor growth in an A375 mouse xenograft model when administered at doses of 20 and 40 mg/kg.[2]

References

1. Zhang, Y., Tan, N.S., Huang, H., *et al.* Three bioactive biflavones isolated from Taxodium mucronatum. *Yunnan Zhiwu Yanjiu* **27(1)**, 107-110 (2005).
2. Meng, H., Pang, Y., Liu, G., *et al.* Podocarpusflavone A inhibits cell growth of skin cutaneous melanoma by suppressing STAT3 signaling. *J. Dermatol. Sci.* **100(3)**, 201-208 (2020).
3. Coulerie, P., Nour, M., Maciuk, A., *et al.* Structure-activity relationship study of biflavonoids on the Dengue virus polymerase DENV-NS5 RdRp. *Planta Med.* **79(14)**, 1313-1318 (2013).
4. Arwa, P.S., Zeraik, M.L., Ximenes, V.F., *et al.* Redox-active biflavonoids from *Garcinia brasiliensis* as inhibitors of neutrophil oxidative burst and human erythrocyte membrane damage. *J. Ethnopharmacol.* **174**, 410-418 (2015).
5. Sirimangkalakitti, N., Juliawaty, L.D., Hakim, E.H., *et al.* Naturally occurring biflavonoids with amyloid β aggregation inhibitory activity for development of anti-Alzheimer agent. *Bioorg. Med. Chem. Lett.* **29(15)**, 1994-1997 (2019).

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