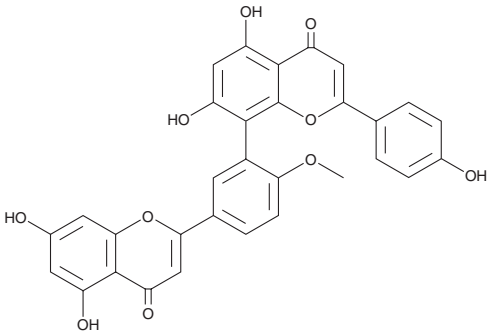
PRODUCT INFORMATION

Bilobetin

Item No. 27899

CAS Registry No.:	521-32-4
Formal Name:	8-[5-(5,7-dihydroxy-4-oxo-4H-1-benzopyran-2-yl)-2-methoxyphenyl]-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
MF:	$C_{31}H_{20}O_{10}$
FW:	552.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 273, 335 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Ginkgo biloba* L.



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

Laboratory Procedures

Bilobetin is supplied as a crystalline solid. A stock solution may be made by dissolving the bilobetin in the solvent of choice, which should be purged with an inert gas. Bilobetin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of bilobetin in these solvents is approximately 2.5, 25, and 10 mg/ml.

Bilobetin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, bilobetin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Bilobetin has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Bilobetin is a biflavonoid that has been found in *G. biloba* and has diverse biological activities.[1-3] It is cytotoxic to HeLa, NCI-H460, Daudi, K562, SKOV3, MIA PaCa-2, and MCF-7 cells *in vitro* (IC_{50}s = 14.79-97.28 µM).[1] Bilobetin halts the cell cycle at the G_2/M phase in HeLa cells in a concentration-dependent manner and induces apoptosis in HeLa cells when used at a concentration of 20 µM. It selectively inhibits matrix metalloproteinase-9 (MMP-9; IC_{50} = 10.33 µM) over MMP-2 and MMP-3 (IC_{50}s = >100 µM).[2] Bilobetin also inhibits aggregation of amyloid-β (1-40) peptide (Aβ40; Item No. 21617) *in vitro* with an IC_{50} value of 4.7 µM.[3]

References

1. Li, M., Li, B., Xia, Z.-M., *et al.* Anticancer effects of five biflavonoids from *Ginkgo Biloba L.* male flowers *in vitro*. *Molecules* **24(8)**, E1496 (2019).
2. Wang, C.G., Yao, W.N., Ahang, B., *et al.* Lung cancer and matrix metalloproteinases inhibitors of polyphenols from *Selaginella tamariscina* with suppression activity of migration. *Bioorg. Med. Chem. Lett.* **28(14)**, 2413-2417 (2018).
3. 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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