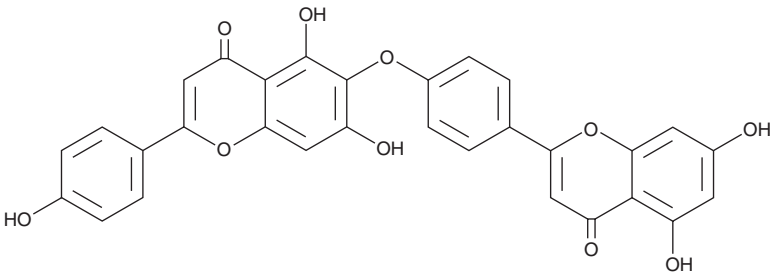
PRODUCT INFORMATION

Hinokiflavone

Item No. 36338

CAS Registry No.:	19202-36-9
Formal Name:	6-[4-(5,7-dihydroxy-4-oxo-4H-1-benzopyran-2-yl)phenoxy]-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
MF:	$C_{30}H_{18}O_{10}$
FW:	538.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 214, 271, 339 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Platycladus orientalis*



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

Laboratory Procedures

Hinokiflavone is supplied as a solid. A stock solution may be made by dissolving the hinokiflavone in the solvent of choice, which should be purged with an inert gas. Hinokiflavone is soluble in acetone, chloroform, dichloromethane, DMSO, and ethyl acetate.

Description

Hinokiflavone is a biflavonoid that has been found in *A. dammara* and has diverse biological activities.[1-4] It inhibits the aggregation of amyloid-β (1-40) (Aβ40; Item No. 21617) *in vitro* (IC_{50} = 9.5 µM).[1] Hinokiflavone (10 µM) promotes pre-mRNA splicing of the genes encoding myeloid cell leukemia-1 (Mcl-1) and eukaryotic translation initiation factor 4α subunit (eIF4α) and inhibits pre-mRNA splicing of the genes encoding heat shock protein 40 (Hsp40) and RIO kinase 3 (RIOK3) in NB4 cells, as well as increases protein SUMOylation in HEK293 cells.[2] It has antiviral activity against the influenza A subtypes H1N1 and H1N3, influenza B, parainfluenza type 3, and respiratory syncytial virus (RSV) in cytopathic effect assays (IC_{50}s = 1.4, 1.3, 1.2, 1, and 2.5 µg/ml, respectively).[3] Hinokiflavone (10-40 µM) inhibits the migration and invasion of, and induces apoptosis in, KYSE-150 esophageal squamous cell carcinoma (ESCC) cells *in vitro* and reduces tumor volume in a KYSE-150 mouse xenograft model when administered at doses of 25 or 50 mg/kg.[4]

References

1. 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).
2. Pawellek, A., Ryder, U., Tammsalu, T., *et al.* Characterisation of the biflavonoid hinokiflavone as a pre-mRNA splicing modulator that inhibits SENP. *Elife* **6:e27402**, (2017).
3. Lin, Y.-M., Flavin, M.T., Schure, R., *et al.* Antiviral activities of biflavonoids. *Planta. Med.* **65(2)**, 120-125 (1999).
4. Gou, J., Zhang, S., Wang, J., *et al.* Hinokiflavone inhibits growth of esophageal squamous cancer by inducing apoptosis *via* regulation of the PI3K/AKT/mTOR signaling pathway. *Front. Oncol.* **12:833719**, (2022).

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