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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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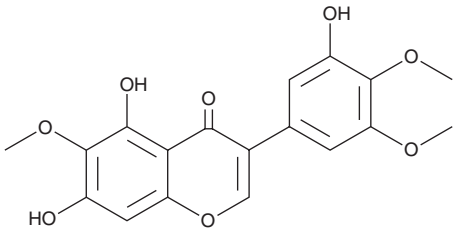
PRODUCT INFORMATION

Irigenin

Item No. 34676

CAS Registry No.:	548-76-5
Formal Name:	5,7-dihydroxy-3-(3-hydroxy-4,5-dimethoxyphenyl)-6-methoxy-4H-1-benzopyran-4-one
MF:	$C_{18}H_{16}O_8$
FW:	360.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 268 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years
Item Origin:	Plant/*Belamcanda chinensis*



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

Laboratory Procedures

Irigenin is supplied as a solid. A stock solution may be made by dissolving the irigenin in the solvent of choice, which should be purged with an inert gas. Irigenin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of irigenin in these solvents is approximately 10 mg/ml.

Irigenin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, irigenin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Irigenin has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Irigenin is a polyketide synthase-derived isoflavonoid that has been found in *B. chinensis* rhizomes and has diverse biological activities.[1-4] It inhibits the cytochrome P450 (CYP) isoform CYP1A (IC_{50} = 1.2 µM) and induces a 2-fold increase in NADPH quinone reductase activity in Hepa-1c1c7 cells when used at a concentration of 7.8 µM.[2] Irigenin inhibits LPS-induced production of nitric oxide (NO) and prostaglandin E_2 (PGE_2; Item No. 14010), as well as increases in the levels of inducible nitric oxide synthase (iNOS) and COX-2, in RAW 264.7 cells.[3] *In vivo*, irigenin (10 and 20 mg/kg) increases survival and reduces cardiac apoptosis, fibrosis, and levels of TNF-α, IL-6, IL-18, and IL-1β in a mouse model of cardiotoxicity induced by doxorubicin (Item No. 15007).[4]

References

1. Raju, K.S.R., Kadian, N., Taneja, I., *et al.* Phytochemical analysis of isoflavonoids using liquid chromatography coupled with tandem mass spectrometry. *Phytochem. Rev.* **14(3)**, 469-498 (2015).
2. Wollenweber, E., Stevens, J.F., Klimo, K., *et al.* Cancer chemopreventive *in vitro* activities of isoflavones isolated from *Iris germanica*. *Planta Med.* **69(1)**, 15-20 (2003).
3. Ahn, K.S., Noh, E.J., Cha, K.-H., *et al.* Inhibitory effects of Irigenin from the rhizomes of *Belamcanda chinensis* on nitric oxide and prostaglandin E_2 production in murine macrophage RAW 264.7 cells. *Life Sci.* **78(20)**, 2336-2342 (2006).
4. Guo, L., Zheng, X., Wang, E., *et al.* Irigenin treatment alleviates doxorubicin (DOX)-induced cardiotoxicity by suppressing apoptosis, inflammation and oxidative stress via the increase of miR-425. *Biomed. Pharmacother.* **125**, 109784 (2020).

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