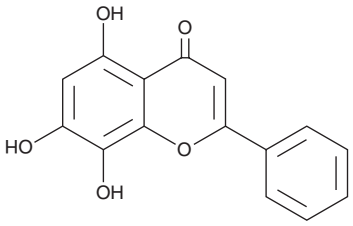
PRODUCT INFORMATION

Norwogonin

Item No. 29227

CAS Registry No.:	4443-09-8
Formal Name:	5,7,8-trihydroxy-2-phenyl-4H-1-benzopyran-4-one
Synonyms:	NSC 128304, 5,7,8-Trihydroxyflavone
MF:	$C_{15}H_{10}O_5$
FW:	270.2
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Scutellaria baicalensis*



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

Laboratory Procedures

Norwogonin is supplied as a solid. A stock solution may be made by dissolving the norwogonin in the solvent of choice, which should be purged with an inert gas. Norwogonin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of norwogonin in ethanol is approximately 0.1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Norwogonin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, norwogonin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Norwogonin has a solubility of approximately 0.1 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Norwogonin is a polyhydroxy flavone that has been found in *S. baicalensis* and has diverse biological activities, including antioxidant, antiviral, and anticancer properties.[1-3] It scavenges ABTS (Item No. 27317) and 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals with IC_{50} values of 1.24 and 35.61 µg/ml, respectively, in cell-free assays.[1] Norwogonin inhibits cytopathic effects induced by enterovirus 71 (EV71) in infected Vero cells (IC_{50} = 31.83 µg/ml).[2] It reduces the viability of MDA-MB-231, BT-549, HCC70, and HCC1806 triple-negative breast cancer (TNBC) cells (IC_{50}s = 32.24, 56.2, 39.05, and 37.3 µM, respectively) but not the non-tumorigenic cell lines MCF-10A and AG11132 (IC_{50}s = >100 µM for both).[3] Norwogonin induces cell cycle arrest at the G_1 and G_2/M phases and increases apoptosis in MDA-MB-231 cells in a concentration-dependent manner.

References

1. Sarian, M.N., Ahmed, Q.U., Mat So'ad, S.Z., *et al.* Antioxidant and antidiabetic effects of flavonoids: A structure-activity relationship based study. *Biomed. Res. Int.* **2017:8386065**, (2017).
2. Choi, H.J., Song, H.-H., Lee, J.-S., *et al.* Inhibitory effects of Norwogonin, Oroxylin A, and Mosloflavone on Enterovirus 71. *Biomol. Ther. (Seoul)* **24(5)**, 552-558 (2016).
3. Abd El-Hafeez, A.A., Khalifa, H.O., Mahdy, E.A.M., *et al.* Anticancer effect of nor-wogonin (5, 7, 8-trihydroxyflavone) on human triple-negative breast cancer cells *via* downregulation of TAK1, NF-κB, and STAT3. *Pharmacol. Rep.* **71(2)**, 289-298 (2019).

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