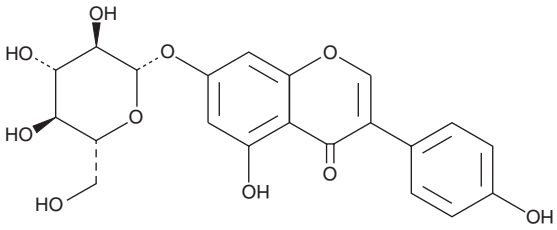
PRODUCT INFORMATION

Genistin

Item No. 14174

CAS Registry No.:	529-59-9
Formal Name:	7-(β-D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonym:	NSC 5112
MF:	$C_{21}H_{20}O_{10}$
FW:	432.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 262 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Genistin is supplied as a crystalline solid. A stock solution may be made by dissolving the genistin in the solvent of choice, which should be purged with an inert gas. Genistin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of genistin in these solvents is approximately 12.5 and 16 mg/ml, respectively.

Genistin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, genistin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Genistin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Genistin is a natural isoflavone isolated from legumes, including soy and kudzu. It is a phytoestrogen, as it stimulates the growth of estrogen-dependent human breast cancer cells *in vivo*.[1] Like other isoflavones, genistin promotes the proliferation of bone marrow stromal cells and osteoblasts and suppresses bone turnover.[2,3] It also increases bone formation in collagen matrix *in vivo*.[4]

References

1. Allred, C.D., Ju, Y.H., Allred, K.F., *et al.* Dietary genistin stimulates growth of estrogen-dependent breast cancer tumors similar to that observed with genistein. *Carcinogenesis* **22(10)**, 1667-1673 (2001).
2. Uesugi, T., Toda, T., Tsuji, K., *et al.* Comparative study on reduction of bone loss and lipid metabolism abnormality in ovariectomized rats by soy isoflavones, daidzin, genistin, and glycitin. *Biol. Pharm. Bull.* **24(4)**, 368-372 (2001).
3. Li, X., Zhang, J.-C., Sui, S., *et al.* Effect of daidzin, genistin, and glycitin on osteogenic and adipogenic differentiation of bone marrow stromal cells and adipocytic transdifferentiation of osteoblasts. *Acta. Pharmacol. Sin.* **26(9)**, 1081-1086 (2005).
4. Wong, R.W. and Rabie, A.B. Effect of genistin on bone formation. *Front. Biosci. (Elite Ed.)* **2(2)**, 764-770 (2010).

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