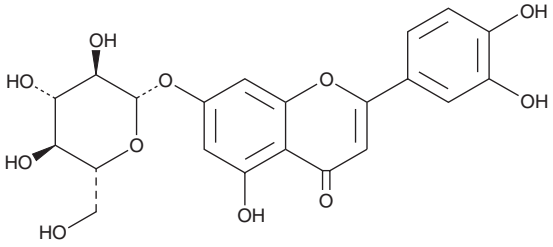
PRODUCT INFORMATION

Luteoloside

Item No. 25141

CAS Registry No.:	5373-11-5
Formal Name:	2-(3,4-dihydroxyphenyl)-7-(β-D-glucopyranosyloxy)-5-hydroxy-4H-1-benzopyran-4-one
Synonyms:	Cynaroside, Luteolin 7-β-D-Glucopyranoside, Luteolin 7-O-Glucoside
MF:	$C_{21}H_{20}O_{11}$
FW:	448.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 256, 350 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Lonicera japonica*



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

Laboratory Procedures

Luteoloside is supplied as a crystalline solid. A stock solution may be made by dissolving the luteoloside in the solvent of choice, which should be purged with an inert gas. Luteoloside is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of luteoloside in these solvents is approximately 5, 10, and 20 mg/ml, respectively.

Luteoloside is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Luteoloside should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Luteoloside has a solubility of approximately 1 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Luteoloside is a flavonoid that has been found in many Chinese herbs with diverse biological activities.[1-4] It reduces lactate dehydrogenase (LDH) and caspase-3 activities and production of reactive oxygen species (ROS) and increases cell viability and 14-3-3η protein levels in H9C2 cardiomyocytes after anoxia/reoxygenation injury.[1] Luteoloside blocks 3C protease activity (IC_{50} = 0.36 mM) and reduces the cytopathic effect of enterovirus 71 in rhabdomyosarcoma cells (EC_{50} = 0.43 mM).[2] It inhibits the growth of hepatocellular carcinoma (HCC) cells *in vitro via* reduction in ROS accumulation, caspase-1 activity, and expression of the NLRP3 inflammasome and reduces the number of lung metastases in an SMMC-7721 HCC mouse xenograft model when administered at a dose of 2 mg/kg.[3] Luteoloside also reduces acanthosis and expression of epidermal differentiation markers in a mouse model of psoriasis induced by imiquimod (Item No. 14956).[4]

References

1. Liu, Z., Yang, L., Huang, J., *et al.* Luteoloside attenuates anoxia/reoxygenation-induced cardiomyocytes injury *via* mitochondrial pathway mediated by 14-3-3η protein. *Phytother. Res.* **32(6)**, 1126-1134 (2018).
2. Cao, Z., Ding, Y., Ke, Z., *et al.* Luteoloside acts as 3C protease inhibitor of enterovirus 71 *in vitro*. *PloS One* **11(2)**, e0148693 (2016).
3. Fan, S.-H., Wang, Y.-Y., Lu, J., *et al.* Luteoloside suppresses proliferation and metastasis of hepatocellular carcinoma cells by inhibition of NLRP3 inflammasome. *PLoS One* **9(2)**, e89961 (2014).
4. Palombo, R., Savini, I., Avigliano, L., *et al.* Luteolin-7-glucoside inhibits IL-22/STAT3 pathway, reducing proliferation, acanthosis, and inflammation in keratinocytes and in mouse psoriatic model. *Cell Death Dis.* **7(8)**, e2344 (2016).

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