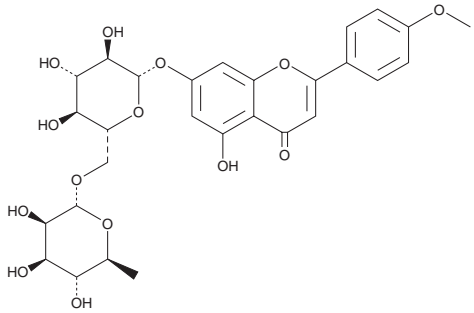
PRODUCT INFORMATION

Linarin

Item No. 26900

CAS Registry No.:	480-36-4
Formal Name:	7-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-5-hydroxy-2-(4-methoxyphenyl)-4H-1-benzopyran-4-one
Synonyms:	Acacetin 7-O-rutinoside, Acaciin, Buddleoflavonoloside, Buddleoside, Linarigenin glycoside
MF:	$C_{28}H_{32}O_{14}$
FW:	592.6
Purity:	≥95%
UV/Vis.:	λ_{max}: 269, 327 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Chrysanthemum* sp.



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

Laboratory Procedures

Linarin is supplied as a crystyalline solid. A stock solution may be made by dissolving the linarin in the solvent of choice. Linarin is soluble in the organic solvent DMSO, which should be purged with an inert gas. The solubility of linarin in DMSO is approximately 10 mg/ml. Linarin is also slightly soluble in ethanol and dimethyl formamide.

Linarin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, linarin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Linarin has a solubility of approximately 0.5 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

Linarin is a flavonoid glycoside that has been found in various fruits and vegetables and has diverse biological activities.[1,2,3] It potentiates cytotoxicity and apoptosis induced by tumor necrosis factor-related apoptosis-induced ligand (TRAIL) in U87MG human glioma cells.[1] *In vivo*, linarin potentiates TRAIL-induced tumor cell apoptosis and reduction of tumor growth in a U87MG mouse xenograft model. Linarin (12.5-50 mg/kg) reduces pulmonary platelet count, edema, and macrophage, polymorphonuclear leukocyte, and lymphocyte infiltration, as well as inhibits TXNIP/NLRP3, MAPK, and NF-κB signaling in a mouse model of LPS-induced acute lung injury.[2] It also inhibits acetylcholinesterase (AChE) and induces dyskinesia recovery by 74.5 and 88%, respectively, in a zebrafish model of Alzheimer's disease when administered in tank water at a concentration of 50 µg/ml.[3]

References

1. Xu, Z.-F., Sun, X.-K., Lan, Y., *et al.* Linarin sensitizes tumor necrosis factor-related apoptosis (TRAIL)-induced ligand-triggered apoptosis in human glioma cells and in xenograft nude mice. *Biomed. Pharmacother.* **95,** 1607-1618 (2017).
2. Han, X., Wu, Y.-C., Meng, M., *et al.* Linarin prevents LPS-induced acute lung injury by suppressing oxidative stress and inflammation via inhibition of TXNIP/NLRP3 and NF-κB pathways. *Int. J. Mol. Med.* **42(3),** 1460-1472 (2018).
3. Pan, H., Zhang, J., Wang, Y., *et al.* Linarin improves the dyskinesia recovery in Alzheimer's disease zebrafish by inhibiting the acetylcholinesterase activity. *Life Sci.* **222,** 112-116 (2019).

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