PRODUCT INFORMATION



Nicotiflorin

Item No. 27392

CAS Registry No.:	17650-84-9	
Formal Name:	3-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-	Un
	D-glucopyranosyl]oxy]-5,7-dihydroxy-2-(4-	
	hydroxyphenyl)-4H-1-benzopyran-4-one	
Synonyms:	Kaempferol 3-O-β-rutinoside,	
	3,4′,5,7-Tetrahydroxyflavone	
	3-rhamnoglucoside	l ö
MF:	$C_{27}H_{30}O_{15}$	
FW:	594.5	
Purity:	≥98%	HO
UV/Vis.:	λ _{max} : 267, 349 nm	Он Д
Supplied as:	A solid	НО
Storage:	-20°C	ОН
Stability:	≥4 years	

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

Laboratory Procedures

Nicotiflorin is supplied as a solid. A stock solution may be made by dissolving the nicotiflorin in the solvent of choice, which should be purged with an inert gas. Nicotiflorin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of nicotiflorin in these solvents is approximately 5 and 3 mg/ml, respectively.

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

Nicotiflorin is a flavonoid that has been found in I. glandulifera and has antioxidant and neuroprotective activities. It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) and ABTS (Item No. 27317) radicals with EC_{50} values of 0.52 and 0.48 mg/ml, respectively, in cell-free assays.¹ Nicotiflorin (1 μ M) prevents hydrogen peroxide-induced decreases in tyrosine hydroxylase activity in PC12 cells and cell death in primary rat mesencephalic neurons.² It decreases infarct volume by 24.5, 45.8, and 63.2% when administered at doses of 2.5, 5, and 10 mg/kg, respectively, in a rat model of cerebral ischemia-reperfusion injury induced by transient middle central artery occlusion (MCAO).³

References

- 1. Szewczyk, K., Sezai Cicek, S., Zidorn, C., et al. Phenolic constituents of the aerial parts of Impatiens glandulifera Royle (Balsaminaceae) and their antioxidant activities. Nat. Prod. Res. 33(19), 2851-2855 (2019)
- 2. Qu, W., Fan, L., Kim, Y.C., et al. Kaempferol derivatives prevent oxidative stress-induced cell death in a DJ-1-dependent manner. J. Pharmacol. Sci. 110(2), 191-200 (2009).
- 3. Li, R., Guo, M., Zhang, G., et al. Nicotiflorin reduces cerebral ischemic damage and upregulates endothelial nitric oxide synthase in primarily cultured rat cerebral blood vessel endothelial cells. J. Ethnopharmacol. 107(1), 143-150 (2006).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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