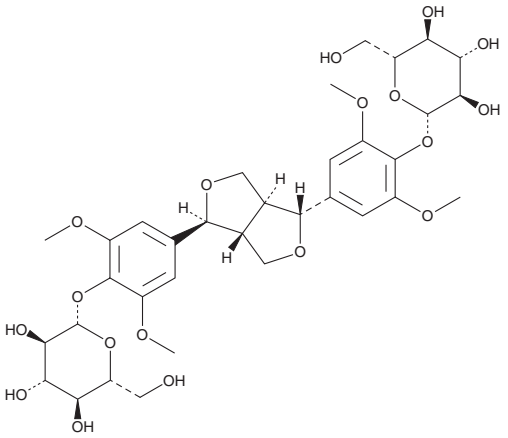
PRODUCT INFORMATION

Eleutheroside E

Item No. 29684



CAS Registry No.:	39432-56-9
Formal Name:	[(1R,3aR,4S,6aS)-tetrahydro-1H,3H-furo[3,4-c]furan-1,4-diyl]*bis*(2,6-dimethoxy-4,1-phenylene)*bis*-β-D-glucopyranoside
Synonym:	Syringin E
MF:	$C_{34}H_{46}O_{18}$
FW:	742.7
Purity:	≥95%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Eleutherococcus senticosus*

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

Laboratory Procedures

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of eleutheroside E can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of eleutheroside E in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Eleutheroside E is a glycoside and major component of *E. senticosus* and has diverse biological activities.[1] It protects against axonal and dendritic atrophies induced by amyloid-β (25-35) (Aβ (25-35); Item No. 24155) in primary rat cortical neurons.[1-4] Eleutheroside E (15, 30, and 60 mg/kg) reduces macrophage infiltration, pannus formation, cartilage damage, bone erosion, and the production of TNF-α and IL-6 in a mouse model of collagen-induced arthritis.[2] It increases insulin sensitivity and reduces pancreatic α- and β-cell death in *db/db* diabetic mice.[3] Eleutheroside E (10 and 50 mg/kg) increases the latency to enter the dark chamber in a passive avoidance test and the levels of glutathione (GSH) in the hippocampus and decreases errors in the Y-maze test and hippocampal malondialdehyde (MDA) levels in a mouse model of sleep deprivation-induced stress.[4]

References

1. Bai, Y., Tohda, C., Zhu, S., *et al. J. Nat. Med.* **65(3-4)**, 417-423 (2011).
2. He, C., Chen, X., Zhao, C., *et al. Inflammation* **37(5)**, 1533-1543 (2014).
3. Ahn, J., Um, M.Y., Lee, H., *et al. Evid. Based Complement. Alternat. Med.* **934183**, (2013).
4. Huang, L.-Z., Wei, L., Zhao, H.-F., *et al. Eur. J. Pharmacol.* **658(2-3)**, 150-155 (2011).

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