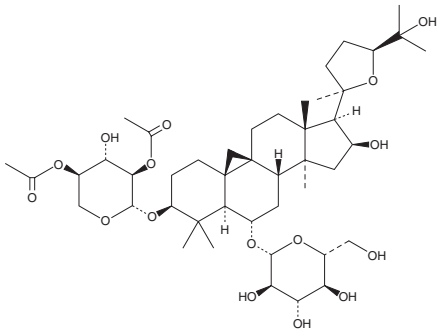
PRODUCT INFORMATION

Isoastragaloside I

Item No. 40279

CAS Registry No.:	84676-88-0
Formal Name:	(3β,6α,16β,20R,24S)-3-[(2,4-di-O-acetyl-β-D-xylopyranosyl)oxy]-20,24-epoxy-16,25-dihydroxy-9,19-cyclolanostan-6-yl-β-D-glucopyranoside
MF:	$C_{45}H_{72}O_{16}$
FW:	869.1
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Astragalus membranaceus* (Fisch.) Bunge



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

Laboratory Procedures

Isoastragaloside I is supplied as a solid. A stock solution may be made by dissolving the isoastragaloside I in the solvent of choice, which should be purged with an inert gas. Isoastragaloside I is soluble in acetonitrile and DMSO.

Description

Isoastragaloside I is a saponin that has been found in *A. membranaceus* and has diverse biological activities.[1-3] It inhibits LPS-induced production of nitric oxide (NO), TNF-α, and IL-1β, as well as inhibits NF-κB phosphorylation in BV-2 microglia when used at concentrations ranging from 25 to 100 µM.[1] Isoastragaloside I (2-10 µg/ml) induces adiponectin production in 3T3-L1 adipocytes.[2] It induces the expression of β-cell differentiation genes and increases mRNA levels of the endocrine progenitor marker *Ngn3* and the β-cell markers *insulin1* and *insulin2* in mouse pancreatic ductal organoids (mPDOs).[3]

References

1. Liu, H., Huang, F., Wu, H., *et al.* Isoastragaloside I inhibits NF-κB activation and inflammatory responses in BV-2 microglial cells stimulated with lipopolysaccharide. *Int. J. Mol. Med.* **40(4)**, 1270-1276 (2017).
2. Xu, A., Wang, H., Hoo, R.L., *et al.* Selective elevation of adiponectin production by the natural compounds derived from a medicinal herb alleviates insulin resistance and glucose intolerance in obese mice. *Endocrinology* **150(2)**, 625-633 (2009).
3. Yu, W., Wang, Y., Jiang, D., *et al.* A saponin from astragalus promotes pancreatic ductal organoids differentiation into insulin-producing cells. *Phytomedicine* **102:154190**, (2022).

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