

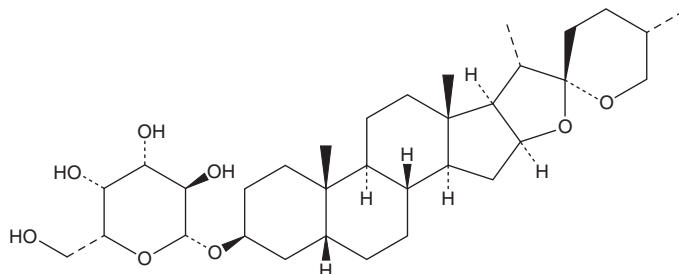
PRODUCT INFORMATION



Timosaponin AI

Item No. 36174

CAS Registry No.: 68422-00-4
Formal Name: (3 β ,5 β ,25S)-spirostan-3-yl β -D-galactopyranoside
Synonym: Sarsasapogenin-3-O- β -galactopyranoside
MF: C₃₃H₅₄O₈
FW: 578.8
Purity: $\geq$ 98%
Supplied as: A solid
Storage: -20°C
Stability: $\geq$ 4 years
Item Origin: Plant/*Anemarrhena asphodeloides*



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

Laboratory Procedures

Timosaponin AI is supplied as a solid. A stock solution may be made by dissolving the timosaponin AI in the solvent of choice, which should be purged with an inert gas. Timosaponin AI is soluble in the organic solvent DMSO at a concentration of approximately 10 mM.

Description

Timosaponin AI is a steroidal saponin that has been found in *A. asphodeloides* and has diverse biological activities.¹⁻³ It is also a metabolite of timosaponin AIII (Item No. 22236).⁴ Timosaponin AI inhibits 5-lipoxygenase (5-LO), COX-2, and dipeptidyl peptidase 4 (DPP-4; IC₅₀s = 3.29, 36.43, and 33.25 μ M, respectively).^{1,2} It reduces total cholesterol and triglyceride levels in 3T3-L1 differentiated adipocytes and increases glucose consumption in insulin-resistant BNL CL.2 mouse embryonic liver cells stimulated with insulin.² Timosaponin AI is cytotoxic to NRK rat kidney epithelial and MOLM-13 acute myeloid leukemia (AML) cells (EC₅₀s = 0.12 and 0.22 mM, respectively).³

References

1. Xie, L., Lee, D.Y.-W., Shang, Y., *et al.* Characterization of spirostanol glycosides and furostanol glycosides from anemarrhenae rhizoma as dual targeted inhibitors of 5-lipoxygenase and Cyclooxygenase-2 by employing a combination of affinity ultrafiltration and HPLC/MS. *Phytomedicine* **77**, 153284 (2020).
2. Jiang, S., Wu, X., Wang, Y., *et al.* The potential DPP-4 inhibitors from Xiao-Ke-An improve the glucolipid metabolism via the activation of AKT/GSK-3 β pathway. *Eur. J. Pharmacol.* **882**, 173272 (2020).
3. Carpinteyro Díaz, A.E., Herfindal, L., Rathe, B.A., *et al.* Cytotoxic saponins and other natural products from flowering tops of *Nartheicum ossifragum* L. *Phytochemistry* **164**, 67-77 (2019).
4. Sun, Y., Liu, L., Peng, Y., *et al.* Metabolites characterization of timosaponin AIII *in vivo* and *in vitro* by using liquid chromatography-mass spectrometry. *J. Chromatogr. B Analyt. Technol. Biomed. Life Sci.* **997**, 236-243 (2015).

WARNING

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

SAFETY 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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