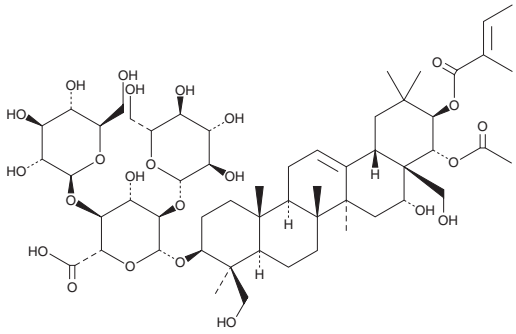
PRODUCT INFORMATION

Escin Ia

Item No. 34057

CAS Registry No.: 123748-68-5
Formal Name: (3β,4β,16α,21β,22α)-22-(acetyloxy)-16,23,28-trihydroxy-21-[[(2E)-2-methyl-1-oxo-2-buten-1-yl]oxy]olean-12-en-3-yl O-β-D-glucopyranosyl-(1→2)-O-[β-D-glucopyranosyl-(1→4)]-β-D-glucopyranosiduronic acid
Synonym: Aescin A
MF: $C_{55}H_{86}O_{24}$
FW: 1,131.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Aesculus chinensis* seeds



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

Laboratory Procedures

Escin Ia is supplied as a solid. A stock solution may be made by dissolving the escin Ia in the solvent of choice, which should be purged with an inert gas. Escin Ia is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of escin Ia in DMSO and DMF is approximately 25 and 30 mg/ml, respectively. Escin Ia is also slightly soluble in ethanol.

Description

Escin Ia is a triterpenoid saponin that has been found in *A. chinensis* and has diverse biological activities.[1-4] It inhibits HIV-1 protease activity in a cell-free assay (IC_{50} = 35 µM).[1] Escin Ia (2.5, 5, and 10 µM) inhibits the invasion of, and epithelial-to-mesenchymal transition (EMT) in, MDA-MB-231 breast cancer cells.[2] It reduces increases in vascular permeability induced by acetic acid in mice, or histamine in rats, when administered at doses of 100 and 200 mg/kg.[3] Escin Ia (100 mg/kg) inhibits increases in serum glucose levels in oral glucose-loaded rats.[4]

References

1. Yang, X.-W., Zhao, J., Cui, Y.-X., *et al.* Anti-HIV-1 protease triterpenoid saponins from the seeds of Aesculus chinensis. *J. Nat. Prod.* **62(11)**, 1510-1513 (1999).
2. Wang, Y., Xu, X., Zhao, P., *et al.* Escin Ia suppresses the metastasis of triple-negative breast cancer by inhibiting epithelial-mesenchymal transition *via* down-regulating LOXL2 expression. *Oncotarget* **7(17)**, 23684-23699 (2016).
3. Matsuda, H., Li, Y., Murakami, T., *et al.* Effects of escins Ia, Ib, IIa, and IIb from horse chestnut, the seeds of *Aesculus hippocastanum* L., on acute inflammation in animals. *Biol. Pharm. Bull.* **20(10)**, 1092-1095 (1997).
4. Matsuda, H., Murakami, T., Li, Y., *et al.* Mode of action of escins Ia and IIa and E,Z-senegin II on glucose absorption in gastrointestinal tract. *Bioorg. Med. Chem.* **6(7)**, 1019-1023 (1998).

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