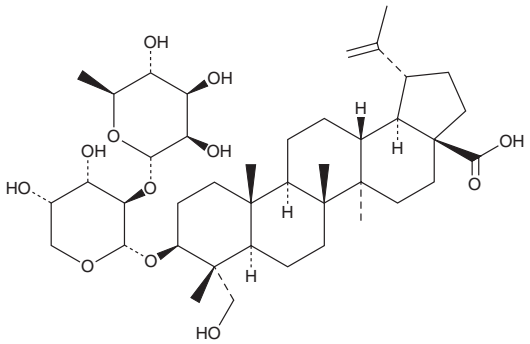
PRODUCT INFORMATION

Pulchinenoside A

Item No. 28545

CAS Registry No.:	129724-84-1
Formal Name:	(3β,4α)-3-[[2-O-(6-deoxy-α-L-mannopyranosyl)-α-L-arabinopyranosyl]oxy]-23-hydroxy-lup-20(29)-en-28-oic acid
Synonym:	Anemoside A_3
MF:	$C_{41}H_{66}O_{12}$
FW:	751.0
Purity:	≥90%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Pulsatilla chinensis*



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

Laboratory Procedures

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

Pulchinenoside A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pulchinenoside A should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Pulchinenoside A has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Pulchinenoside A is a triterpenoid saponin that has been found in *Pulsatilla chinensis* and has diverse biological activities.[1,2] It inhibits NMDA-evoked currents in hippocampal neurons (IC_{50}s = 18.48 and 20.19 µM at -50 and +50 mV, respectively) and inhibits NMDA-induced neuronal cell death when used at a concentration of 30 µM.[2] Pulchinenoside A (30 and 100 mg/kg) increases the levels of serotonin (5-HT; Item No. 14332), 5-hydroxyindolacetic acid (5-HIAA; Item No. 22889), and norepinephrine (Item No. 16673) in the hippocampus and 5-HIAA and norepinephrine in the prefrontal cortex in mice. It reduces the time spent immobile in the forced swim test in mice when administered at doses of 30 and 100 mg/kg and increases the time spent in the target quadrant of the Morris water maze in mice at 100 mg/kg. Pulchinenoside A (12.6 and 25.2 mg/kg) reduces infarct volume in a middle cerebral artery occlusion (MCAO) rat model of ischemia. It also induces relaxation of precontracted isolated rat thoracic aorta and renal, mesenteric, and left coronary arteries in a concentration-dependent manner.[1]

References

1. Zhang, D.-M., Lin, S.-M., Lau, C.-W., *et al.* Anemoside A_3-induced relaxation in rat renal arteries: Role of endothelium and Ca^{2+} channel inhibition. *Planta Med.* **76(16)**, 1814-1819 (2010).
2. Ip, F.C.F., Fu, W.-Y., Cheng, E.Y.L., *et al.* Anemoside A3 enhances cognition through the regulation of synaptic function and neuroprotection. *Neuropsychopharmacology* **40(8)**, 1877-1887 (2015).

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