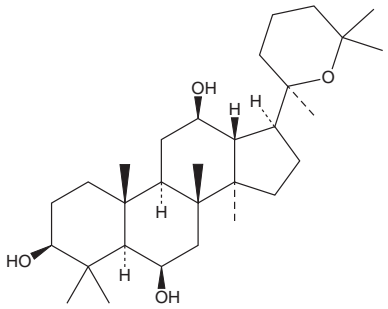
PRODUCT INFORMATION

Panaxatriol

Item No. 28835

CAS Registry No.:	32791-84-7
Formal Name:	(3β,6β,12β,20R)-20,25-epoxy-dammarane-3,6,12-triol
Synonym:	NSC 308880
MF:	$C_{30}H_{52}O_4$
FW:	476.7
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Panax ginseng*



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

Laboratory Procedures

Panaxatriol is supplied as a solid. A stock solution may be made by dissolving the panaxatriol in the solvent of choice, which should be purged with an inert gas. Panaxatriol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of panaxatriol is approximately 10 mg/ml in ethanol and DMF and approximately 3 mg/ml in DMSO.

Panaxatriol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, panaxatriol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Panaxatriol has a solubility of approximately 0.16 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Panaxatriol is a sapogenin that has been found in *P. ginseng* and has diverse biological activities, including antiproliferative, cardioprotective, and antidiabetic properties.[1,2,3] It inhibits the proliferation of DU15 prostate cancer cells (IC_{50} = 30 µM) and induces apoptosis by increasing production of reactive oxygen species (ROS) and decreasing the mitochondrial membrane potential.[1] Panaxatriol (5 mg/kg) reduces ischemia and reperfusion-induced myocardial dysfunction, increases left ventricular developed pressure (LVDevP) and glutathione (GSH) levels, and decreases cardiac lactate dehydrogenase (LDH), creatine kinase (CK), and malondialdehyde (MDA) levels in rats when administered for seven consecutive days prior to injury.[2] Dietary administration of panaxatriol (0.2% for 6 weeks) decreases fasting blood glucose levels in KKAy insulin-resistant mice.[3]

References

1. Yu, R., Zhang, Y., Xu, Z., *et al.* Potential antitumor effects of panaxatriol against DU-15 human prostate cancer cells is mediated via mitochondrial mediated apoptosis, inhibition of cell migration and sub-G1 cell cycle arrest. *J. BUON.* **23(1),** 200-204 (2018).
2. Kim, T.-H. and Lee, S.-M. The effects of ginseng total saponin, panaxadiol and panaxatriol on ischemia/reperfusion injury in isolated rat heart. *Food Chem. Toxicol.* **48(6),** 1516-1520 (2010).
3. Takamura, Y., Nomura, M., Uchiyama, A., *et al.* Effects of aerobic exercise combined with panaxatriol derived from ginseng on insulin resistance and skeletal muscle mass in type 2 diabetic mice. *J. Nutr. Sci. Vitaminol. (Tokyo)* **63(5),** 339-348 (2017).

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