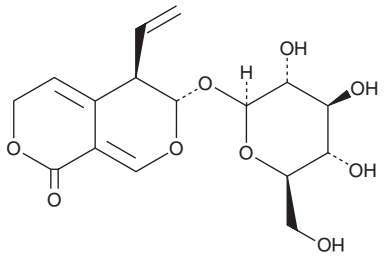
PRODUCT INFORMATION

Gentiopicrin

Item No. 25102

CAS Registry No.:	20831-76-9
Formal Name:	(5R,6S)-5-ethenyl-6-(β-D-glucopyranosyloxy)-5,6-dihydro-1H,3H-pyrano[3,4-c]pyran-1-one
Synonyms:	Gentiopicroside, NSC 606402
MF:	$C_{16}H_{20}O_9$
FW:	356.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 210, 245, 271 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Gentiopicrin is supplied as a crystalline solid. A stock solution may be made by dissolving the gentiopicrin in the solvent of choice. Gentiopicrin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of gentiopicrin in ethanol is approximately 2 mg/ml and approximately 50 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of gentiopicrin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of gentiopicrin in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Gentiopicrin is an iridoid glycoside that has been found in *G. rigescens* and has diverse biological activities.[1-3] *In vivo*, gentiopicrin (130 mg/kg) attenuates acute cholestasis and liver damage and reverses bile acid dyshomeostasis induced by α-napthylisothiocyanate (ANIT) in mice.[1] It increases the paw withdrawal threshold in the cold-plate test and latency to paw withdrawal in the plantar test in mice when administered at doses of 25, 50, and 100 mg/kg.[2] Gentiopicrin (100 mg/kg) also decreases NMDA receptor-mediated excitatory postsynaptic currents (EPSCs) in the nucleus accumbens and reverses morphine-induced conditioned place preference in mice.[3]

References

1. Tang, X., Yang, Q., Yang, F., *et al*. Target profiling analyses of bile acids in the evaluation of hepatoprotective effect of gentiopicroside on ANIT-induced cholestatic liver injury in mice. *J. Ethnaopharmacol*. **194**, 63-71 (2016).
2. Liun, N., Li, Y.X., Gong, S.S., *et al*. Antinociceptive effects of gentiopicroside on neuropathic pain induced by chronic constriction injury in mice: A behavioral and electrophysiological study. *Can. J. Physiol. Pharmacol*. **94(7)**, 769-778 (2016).
3. Liu, S.B., Ma, L., Guo, H.J., *et al*. Gentiopicroside attenuates morphine rewarding effect through downregulation of GluN2B receptors in nucleus accumbens. *CNS Neurosci. Ther*. **18(8)**, 652-658 (2012).

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