

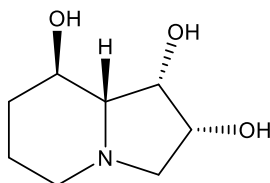
Catalog # 10-2674

Swainsonine

CAS# 72741-87-8

(1S,2R,8R,8aR)-octahydro-1,2,8-indolizinetriol

Lot # X102240



A naturally occurring alkaloidal toxin found in locoweed. Inhibits the biosynthesis of complex glycoproteins by inhibition of Golgi mannosidase II ($IC_{50} = 0.2 \mu M$).¹ Inhibits growth and potentiates the cytotoxic effect of taxol in hepatocellular carcinoma *in vivo*.² Induces apoptosis in a variety of cell types including cerebral cortical neurons.³ Impairs adult neurogenesis and spatial learning and memory.⁴ Abrogation of complex glycosylation by swainsonine results in strain- and cell-specific inhibition of prion replication.⁵ Induces lysosomal storage disease in farm animals.⁶

- 1) Tulsiani *et al.* (1985), *Marked differences in the swainsonine inhibition of rat liver lysosomal alpha-D-mannosidase, rat liver Golgi mannosidase II, and jack bean alpha-D-mannosidase*; Arch. Biochem. Biophys., **236** 427
- 2) You *et al.* (2012), *Swainsonine inhibits growth and potentiates the cytotoxic effect of paclitaxel in hepatocellular carcinoma in vitro and in vivo*; Oncol. Rep., **28** 2091
- 3) Lu *et al.* (2015), *Swainsonine-induced apoptosis pathway in cerebral cortical neurons*; Res. Vet. Sci., **102** 34
- 4) Wang *et al.* (2015), *Exposure to swainsonine impairs adult neurogenesis and spatial learning and memory*; Toxicol. Lett., **232** 263
- 5) Browning *et al.* (2011), *Abrogation of complex glycosylation by swainsonine results in strain- and cell-specific inhibition of prion replication*; J. Biol. Chem., **286** 40962
- 6) Dantas *et al.* (2007), *Swainsonine-induced lysosomal storage disease in goats caused by the ingestion of Turbina cordata in Northeastern Brazil*; Toxicon, **49** 111

PHYSICAL DATA

Molecular Weight:	173.21
Molecular Formula:	C ₈ H ₁₅ NO ₃
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 10 mg/ml), Ethanol (up to 10 mg/ml), Water (8 mg/ml)
Physical Description:	White or off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO, ethanol, or distilled water may be stored at -20°C for up to 3 months.

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