

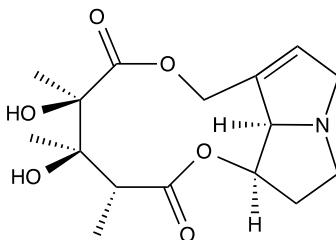
Catalog # 10-2872

Monocrotaline

CAS# 315-22-0

(3R,4R,5R)-4,5,8,10,12,13,13aR,13bR-octahydro-4,5-dihydroxy-3,4,5-trimethyl-2H-[1,6]dioxacycloundecino[2,3,4-gh]pyrrolizine-2,6(3H)-dione
Crotaline; MCT; NSC28693

Lot # X105369



Monocrotaline is a naturally occurring pyrrolizidine alkaloid used to create an animal model of pulmonary arterial hypertension (PAH). It can mimic several important aspects of human PAH including vascular remodeling, proliferation of smooth muscle cells, endothelial dysfunction, production of inflammatory cytokines and right ventricle failure.¹ Induces endoplasmic reticulum stress in a rat model of PAH.² Induces sinusoidal obstruction syndrome, a form of drug-induced liver injury.³ May be used to establish a mouse model of pulmonary fibrosis.⁴

- 1) Nogueira-Ferreira *et al.* (2015), *Exploring the monocrotaline animal model for the study of pulmonary arterial hypertension: A network approach*; J. Pulm. Pharmacol. Ther., **35** 8
- 2) Wang *et al.* (2016), *Evaluation and Treatment of Endoplasmic Reticulum (ER) Stress in Right Ventricular Dysfunction during Monocrotaline-Induced Rat Pulmonary Arterial Hypertension*; Cardiovasc. Drugs Ther., **30** 587
- 3) Nakamura *et al.* (2012), *Sorafenib attenuates monocrotaline-induced sinusoidal obstruction syndrome in rats through suppression of JNK and MMP-9*; J. Hepatol., **57** 1037
- 4) Hayashi *et al.* (1995), *Establishment of an animal model for pulmonary fibrosis in mice using monocrotaline*; Toxicol. Pathol. **23** 63

PHYSICAL DATA

Molecular Weight:	325.36
Molecular Formula:	C ₁₆ H ₂₃ NO ₆
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	Soluble in DMSO (up to 50 mg/ml with warming), in ethanol (up to 10 mg/ml with warming), or in organic solvents such as Chloroform (up to 50 mg/ml)
Physical Description:	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 or ethanol may be stored at -20°C for up to 3 months.

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