



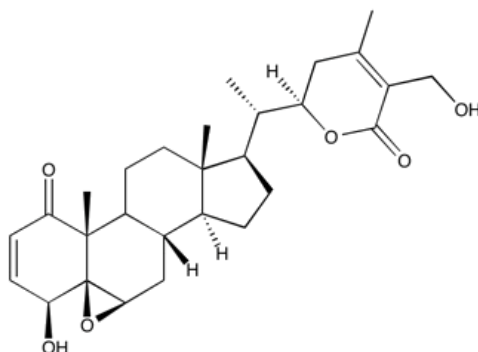
Catalog # 10-2114

Withaferin A

CAS# 5119-48-2

(4 β , 5 β , 6 β , 22R)-5,6-Epoxy-4,22,27-trihydroxy-1-oxoergosta-2,24-dien-26-oic acid δ -lactone

Lot # X101618



Displays potent antiangiogenesis activity inhibiting endothelial cell sprouting *in vitro* (IC₅₀ = 12 nM) and *in vivo*.¹ Potently inhibits NF- κ B activation by preventing TNF α -induced activation of IKK β .² Covalently binds to the intermediate filament protein, vimentin³ inducing its disassembly and serine 56 phosphorylation⁴. Inhibits reactive gliosis and blocks TNF α -mediated neuronal apoptosis in *in vivo* models.⁵

- 1) Mohan *et al.* (2004), *Withaferin A is a potent inhibitor of angiogenesis*; *Angiogenesis*, **7** 115
- 2) Kaileh *et al.* (2007), *Withaferin A strongly elicits IkappaB kinase beta hyperphosphorylation concomitant with inhibition of its kinase activity*; *J. Biol. Chem.*, **282** 4253
- 3) Bargagna-Mohan *et al.* (2007), *The tumor inhibitor and antiangiogenic agent withaferin A targets the intermediate filament protein vimentin*; *Chem. Biol.*, **14** 623
- 4) Thaiparambil *et al.* (2011), *Withaferin A inhibits breast cancer invasion and metastasis at sub-cytotoxic doses by inducing vimentin disassembly and serine 56 phosphorylation*; *Int. J. Cancer*, **129** 2744
- 5) Livne-Bar *et al.* (2016), *Pharmacologic inhibition of reactive gliosis blocks TNF- α -mediated neuronal apoptosis* *Cell Death Dis.*, **7** e2386

PHYSICAL DATA

Molecular Weight:	470.60
Molecular Formula:	C ₂₈ H ₃₈ O ₆
Purity:	99% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 20 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 may be stored at -20°C for up to 1 month.

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