

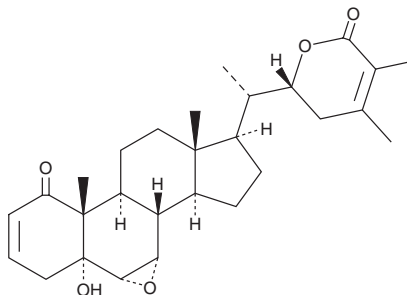
PRODUCT INFORMATION



Withanolide B

Item No. 11798

CAS Registry No.: 56973-41-2
Formal Name: 6 α ,7 α -epoxy-5 α ,22R-dihydroxy-1-oxo-ergosta-2,24-dien-26-oic acid, δ -lactone
MF: C₂₈H₃₈O₅
FW: 454.6
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 225 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Plant/*Withania somnifera*



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

Laboratory Procedures

Withanolide B is supplied as a crystalline solid. A stock solution may be made by dissolving the withanolide B in the solvent of choice, which should be purged with an inert gas. Withanolide B is soluble in organic solvents such as acetonitrile and methanol. The solubility of withanolide B in these solvents is approximately 0.1 and 0.5 mg/ml, respectively.

Description

Withanolide B is a withanolide that has been found in *W. somnifera*.¹ Unlike withanolide A, it does not increase glucose uptake in L6 myotubes.² In *in silico* docking studies, withanolide B was identified as a neuronal nitric oxide synthase (nNOS) inhibitor ($K_i = 5.15$ nM), that also inhibited inducible NOS (iNOS) and endothelial NOS (eNOS; K_i s = 15.48 and 66.59 nM, respectively), and as a ligand for the PARP1 catalytic domain with an estimated K_i value of 7.54 nM.^{3,4}

References

1. Nayak, P.S., Upadhyaya, S.D., and Upadhyaya, A. HPLC analysis of bioactive steroids from the roots of *Withania somnifera* (L.) Dunal (Ashwagandha). *Lat. Am. J. Pharm.* **29**(3), 468-471 (2010).
2. Gorelick, J., Rivka, R., Avinoam, S., et al. Hypoglycemic activity of withanolides and elicited *Withania somnifera*. *Phytochemistry* **116**, 283-289 (2015).
3. Kumar, G., Paliwal, P., Patnaik, N., et al. *Withania somnifera* phytochemicals confer neuroprotection by selective inhibition of nNos: An *in silico* study to search potent and selective inhibitors for human nNOS. *J. Theor. Comput. Chem.* **16**(5), 1750042 (2017).
4. Mukherjee, S., Kumar, G., and Patnaik, R. Identification of potential inhibitors of PARP-1, a regulator of caspase-independent cell death pathway, from *Withania somnifera* phytochemicals for combating neurotoxicity: A structure-based *in-silico* study. *J. Theor. Comput. Chem.* **16**(7), 1750062 (2017).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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