

PRODUCT INFORMATION



Withanoside-IV

Item No. 11805

CAS Registry No.: 362472-81-9

Formal Name: (1 α ,3 β ,22R)-3-[(6-O- β -D-glucopyranosyl- β -D-glucopyranosyl)oxy]-1,22,27-trihydroxy-ergosta-5,24-dien-26-oic acid, δ -lactone

Synonym: WSG-3

MF: C₄₀H₆₂O₁₅

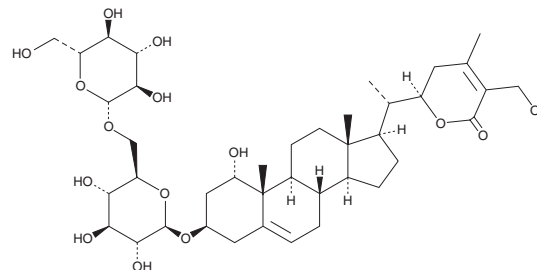
FW: 782.9

Purity: $\geq 98\%$

Supplied as: A 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

Withanoside-IV is supplied as a solid. A stock solution may be made by dissolving the withanoside-IV in the solvent of choice, which should be purged with an inert gas. Withanoside-IV is soluble (≥ 10 mg/ml) in DMSO.

Description

Withanoside-IV is a phytosterol glycoside that has been found in *W. somnifera* and has neuroprotective activity.¹⁻³ It reduces parietal cortex neuronal atrophy and prevents spatial memory deficits in the water maze test induced by amyloid- β (25-35) (A β (25-35)) in a mouse model of Alzheimer's disease when administered at a dose of 10 μ mol/kg per day.² Withanoside-IV (10 μ mol/kg per day) increases spinal cord axonal growth and density and myelin levels in a mouse model of surgery-induced spinal cord injury (SCI).³

References

1. Zhao, J., Nakamura, N., Hattori, M., *et al.* Withanolide derivatives from the roots of *Withania somnifera* and their neurite outgrowth activities. *Chem. Pharm. Bull. (Tokyo)* **50(6)**, 760-765 (2002).
2. Kuboyama, T., Tohda, C., and Komatsu, K. Withanoside IV and its active metabolite, sominone, attenuate A β (25-35)-induced neurodegeneration. *Eur. J. Neurosci.* **23(6)**, 1417-1426 (2006).
3. Hakayama, N. and Tohda, C. Withanoside IV improves hindlimb function by facilitating axonal growth and increase in peripheral nervous system myelin level after spinal cord injury. *Neurosci. Res.* **58(2)**, 176-182 (2007).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 05/02/2025

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM