

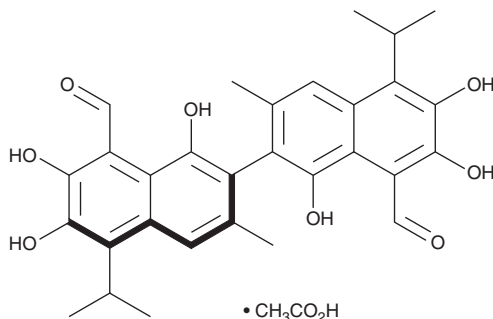
PRODUCT INFORMATION

(-)-Gossypol (acetate)

Item No. 42421

CAS Registry No.: 866541-93-7
Formal Name: (2R)-1,1',6,6',7,7'-hexahydroxy-3,3'-dimethyl-5,5'-bis(1-methylethyl)-[2,2'-binaphthalene]-8,8'-dicarboxaldehyde, compd. with acetic acid (1:1)

Synonym: AT-101
MF: $C_{30}H_{30}O_8 \cdot C_2H_4O_2$
FW: 578.6
Purity: $\geq 98\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Synthetic



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

Laboratory Procedures

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

Description

(-)-Gossypol is a polyphenol that has been found in *Gossypium* and has diverse biological activities.¹⁻⁵ It induces complete immobilization of isolated human sperm within 3 minutes when used at a concentration of 5 mg/ml.² (-)-Gossypol inhibits Bcl-2, Bcl-xL, and myeloid cell leukemia-1 (Mcl-1; K_i s = 0.32, 0.48, and 0.18 μM , respectively).³ It induces apoptosis in patient-derived B cell chronic lymphocytic leukemia (B-CLL) cells when used at a concentration of 20 μM .⁴ (-)-Gossypol (35 mg/kg), in combination with rituximab and cyclophosphamide (Item No. 13849), induces tumor regression in an RL diffuse large B-cell lymphoma (DLBCL) mouse xenograft model.⁵

References

- Robinson, P.H., Getachew, G., De Peters, E.J., *et al.* Influence of variety and storage for up to 22 days on nutrient composition and gossypol level of Pima cottonseed (*Gossypium* spp.). *Anim. Feed Sci. Technol.* **91**(3-4), 149-156 (2001).
- Kim, I.C., Waller, D.P., Marcelle, G.B., *et al.* Comparative in vitro spermicidal effects of (+)-gossypol, (-)-gossypol and gossypolone. *Contraception* **30**(3), 253-259 (1984).
- Wang, G., Nikolovska-Coleska, Z., Yang, C.Y., *et al.* Structure-based design of potent small-molecule inhibitors of anti-apoptotic Bcl-2 proteins. *J. Med. Chem.* **49**(21), 6139-6142 (2006).
- Balakrishnan, K., Burger, J.A., Wierda, W.G., *et al.* AT-101 induces apoptosis in CLL B cells and overcomes stromal cell-mediated Mcl-1 induction and drug resistance. *Blood* **113**(1), 149-153 (2009).
- Paoluzzi, L., Gonen, M., Gardner, J.R., *et al.* Targeting Bcl-2 family members with the BH3 mimetic AT-101 markedly enhances the therapeutic effects of chemotherapeutic agents in in vitro and in vivo models of B-cell lymphoma. *Blood* **111**(11), 5350-5358 (2008).

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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