



LKT Laboratories, Inc.

Gossypol Acetic Acid

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Product Information

Product ID G5875

CAS No. 12542-36-8

Chemical Name 1,1',6,6',7,7'-Hexahydroxy-3,3'-dimethyl-5,5'-bis(1-methylethyl)[2,2'-binaphthalene]-8,8'-dicarboxaldehyde-acetic acid

Synonym Gossypol acetate

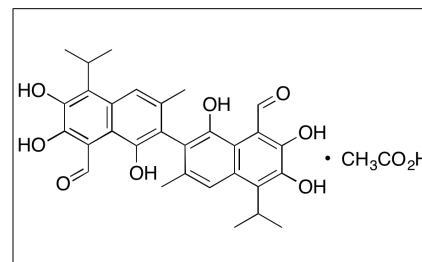
Formula $C_{30}H_{30}O_8 \cdot C_2H_4O_2$

Formula Wt. 578.61

Melting Point 184

Purity $\geq 98\%$

Solubility Soluble in DMSO, methanol or ethanol. Insoluble in water.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
G5875	250 mg	\$158.40
G5875	1 g	\$503.00

Store Temp 4°C

Ship Temp Ambient

Description Gossypol acetic acid (GA) exhibits anticancer chemotherapeutic, pro-oxidative, antioxidative, and antibacterial activities. GA inhibits Bcl-2/Bcl-xL, enhancing TRAIL/mitochondria-induced apoptosis in breast cancer cells. In animal models, GA delayed the onset of androgen-independent prostate cancer. In macrophages, GA increases production of ROS, upregulates expression of caspases 3 and 9, and decreases the mitochondrial membrane potential, inducing apoptosis. GA increases activity of glutathione peroxidase and inhibits lipid peroxidation but also increases generation of ROS and induces DNA damage. This compound also exhibits antibiotic activity, inhibiting growth of gram negative bacteria such as *Edwardsiella*. Additionally, GA has been studied as a male contraceptive; it inhibits sialyl transferase activity in seminal plasma, decreases tubulin content and spermatocyte mobility, and reversibly inhibits spermatogenesis in vivo.

References Deng S, Yuan H, Yi J, et al. Gossypol acetic acid induces apoptosis in RAW264.7 cells via a caspase-dependent mitochondrial signaling pathway. *J Vet Sci.* 2013;14(3):281-9. PMID: 23820203.

Hall C, Troutman SM, Price DK, et al. Bcl-2 family of proteins as therapeutic targets in genitourinary neoplasms. *Clin Genitourin Cancer.* 2013 Mar;11(1):10-9. PMID: 23083798.

Kisim A, Atmaca H, Cakar B, et al. Pretreatment with AT-101 enhances tumor necrosis factor-related apoptosis-inducing ligand (TRAIL)-induced apoptosis of breast cancer cells by inducing death receptors 4 and 5 protein levels. *J Cancer Res Clin Oncol.* 2012 Jul;138(7):1155-63. PMID: 22411600.

El-Sharaky AS, Wahby MM, Bader El-Dein MM, et al. Mutual anti-oxidative effect of gossypol acetic acid and gossypol-iron complex on hepatic lipid peroxidation in male rats. *Food Chem Toxicol.* 2009 Nov;47(11):2735-41. PMID: 19665044.

Loberg RD, McGregor N, Ying C, et al. In vivo evaluation of AT-101 (R-(-)-gossypol acetic acid) in androgen-independent growth of VCaP prostate cancer cells in combination with surgical castration. *Neoplasia.* 2007 Dec;9(12):1030-7. PMID: 18084610.

Yildirim-Aksoy M, Lim C, Dowd MK, et al. In vitro inhibitory effect of gossypol from gossypol-acetic acid, and (+)- and (-)- isomers of gossypol on the growth of *Edwardsiella ictaluri*. *J Appl Microbiol.* 2004;97(1):87-92. PMID: 15186445.

Sharma S, Kumar M, Goyal RB, et al. Reversible antispermatic effect of gossypol in langur monkeys (*Presbytis entellus*)

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.