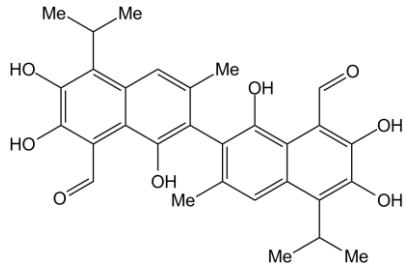
Product Name: Gossypol

Revision Date: 6/30/2016

Product Data Sheet

Chemical Properties



Product Name: Gossypol

Cas No.: 303-45-7

M.Wt: 518.55

Formula: C30H30O8

Chemical Name: 7-(8-formyl-1,6,7-trihydroxy-3-methyl-5-propan-2-ylnaphthalen-2-yl)-2,3,8-trihydroxy-6-methyl-4-propan-2-ylnaphthalene-1-carbaldehyde

Canonical SMILES: CC1=C(C(=C2C(=C1)C(=C(C(=C2C=O)O)O)C(C)C)O)C3=C(C=C4C(=C3O)C(=C(C(=C4C(C)C)O)O)C=O)C

Solubility: >26mg/mL in DMSO

Storage: Store at -20°C

General tips: For obtaining a higher solubility , please warm the tube at 37° C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20° C for several months.

Shopping Condition: Evaluation sample solution : ship with blue ice
All other available size: ship with RT , or blue ice upon request

Biological Activity

Targets : Bcl-2 Family

Pathways: Apoptosis >> Bcl-2 Family

Description:

Gossypol is a natural phenol compound derived from cotton stems, leaves, seeds, and flower buds.Gossypol has a 518.55 Dalton molecular weight and a yellow pigment. The most common toxic effectof Gossypolis the impairment of male and female reproduction. Another important toxic effect is its interference with immune function, reducing an animal's resistance to infections and impairing the efficiency of vaccines[1].

In vitro: In bovine granulosa cells, treatment with gossypol dose-dependently decreased hCG-induced cAMP formation. Gossypol (12.5 μg/ml) inhibited basal cAMP level and progesterone secretion(2). Gossypol (50 and 100 μg/ml) decreased the percentage of sperm that completed the swim-up procedure. When cultured with5 or 10 μg/ml gossypol, development of cleaved embryos was reduced(3). In the lymphocytes isolated from lymph nodes of BALB/c mice, gossypol significantly inhibited the proliferation of mouse lymphocytes stimulated with phorbol ester plus ionomycin in a dose-dependent manner. Gossypol significantly suppressed the lymphoblastic transformation of both T and B lymphocyte subsets. Moreover, gossypol could induce apoptosis of lymphocytes in a time- and dose-dependent manner (4).
In vivo: In male Sprague-Dawley rats, gossypol (25 mg/kg, i.p.) caused marked changes in the activity of the hepatic and serum γ-glutamyltransferase (GGT) and microsomal monooxygenases (5). Rats that received lower gossypol doses (15 mg/kg/day for four weeks or 30 mg/kg/day for two weeks) showed morphological changes in the liver(6).

***Reference**:*

[1]. Gadelha I C N, Fonseca N B S, Oloris S C S, et al. Gossypol toxicity from cottonseed products[J]. The Scientific World Journal, 2014, 2014.
[2]. Lin Y C, Coskun S, Sanbuissho A. Effects of gossypol on in vitro bovine oocyte maturation and steroidogenesis in bovine granulosa cells[J]. Theriogenology, 1994, 41(8): 1601-1611.
[3]. Brocas C, Rivera R M, Paula-Lopes F F, et al. Deleterious actions of gossypol on bovine spermatozoa, oocytes, and embryos[J]. Biology of reproduction, 1997, 57(4): 901-907.
[4]. Xu W, Xu L, Lu H, et al. The immunosuppressive effect of gossypol in mice is mediated by inhibition of lymphocyte proliferation and by induction of cell apoptosis[J]. ActaPharmacologicaSinica, 2009, 30(5): 597-604.
[5]. Deoras D P, Young-Curtis P, Dalvi R R, et al. Effect of gossypol on hepatic and serum γ-glutamyltransferase activity in rats[J]. Veterinary research communications, 1997, 21(5): 317-323.
[6]. Ying W, Hai-Peng L. Hepatotoxicity of gossypol in rats[J]. Journal of ethnopharmacology, 1987, 20(1): 53-64.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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