

Product Data Sheet

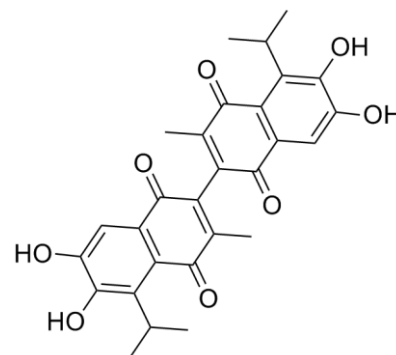
Chemical Properties

Product Name: Apogossypolone (ApoG2)

Cas No.: 886578-07-0

M.Wt: 490.501

Formula: C₂₈H₂₆O₈



Chemical Name: 6,6',7,7'-tetrahydroxy-5,5'-diisopropyl-3,3'-dimethyl-[2,2'-binaphthalene]-1,1',4,4'-tetraone

Canonical SMILES: CC1=C(C2=C(C(=O)C(=O)C=C2C(=C1C3=C(C4=CC(=O)C(=O)C(=C4C(=C3C)O)C(C)C)O)O)C(C)C)O

Solubility: >24.6mg/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:

Apogossypolone is an inhibitor of Bcl-2, Mcl-1 and Bcl-XL with Ki values of 35nM, 25nM and 660nM, respectively [1].

The MTT-based cell cytotoxicity assay shows that apogossypolone has an anticancer activity with IC₅₀ values of 1, 2 and 3μM, respectively in PC-3, DU-145 (human prostate cancer cell lines) and

MDA-MB-231(human breast cancer cell line). Apogossypolone is also found to inhibit the colony formation of DU-145 cells. The mechanism is that apogossypolone binds to Bcl-2 and prevents its association with BH3-only pro-apoptotic proteins, leading the pro-apoptotic proteins to participate in the apoptotic response [2].

Besides prostate cancer and breast cancer, apogossypolone is also potent in follicular lymphoma. Apogossypolone significantly inhibits the cell growth via inducing apoptosis in WSU-FSCCL cell line with IC50 value of 109.2nM at 72h [3].

Reference:

- [1] Zhang XQ, Huang XF, Hu XB, Zhan YH, An QX, Yang SM, Xia AJ, Yi J, Chen R, Mu SJ, Wu DC. Apogossypolone, a novel inhibitor of antiapoptotic Bcl-2 family proteins, induces autophagy of PC-3 and LNCaP prostate cancer cells in vitro. *Asian J Androl*. 2010 Sep;12(5):697-708.
- [2] Zhan Y, Jia G, Wu D, Xu Y, Xu L. Design and synthesis of a gossypol derivative with improved antitumor activities. *Arch Pharm (Weinheim)*. 2009 Apr;342(4):223-9.
- [3] Arnold AA, Aboukameel A, Chen J, Yang D, Wang S, Al-Katib A, Mohammad RM. Preclinical studies of Apogossypolone: a new nonpeptidic pan small-molecule inhibitor of Bcl-2, Bcl-XL and Mcl-1 proteins in Follicular Small Cleaved Cell Lymphoma model. *Mol Cancer*. 2008 Feb 14;7:20.

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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