Natural Products

ChemFaces

Panaxadiol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Panaxadiol

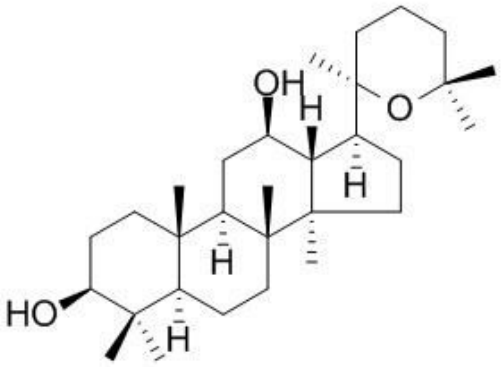
Catalog No.: CFN99981

Cas No.: 19666-76-3

Purity: > 98%

M.F: $C_{30}H_{52}O_3$

M.W: 460.73



Physical Description: White powder

Synonyms:(3S,5R,8R,9R,10R,12R,13R,14R,17S)-4,4,8,10,14-pentamethyl-17-[(2R)-2,6,6-trimethyl-2-oxanyl]-2,3,5,6,7,9,11,12,13,15,16,17-dodecahydro-1H-cyclopenta[a]phenanthrene-3,12-diol.

[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Others.

[Source]

The roots of *Panax ginseng C. A. Mey.*

[Biological Activity or Inhibitors]

Panaxadiol , a ginseng saponin with a dammarane skeleton, selectively interferes with the cell cycle in human cancer cell lines, it inhibits DNA synthesis in a dose-dependent manner with IC50 values ranging from 0.8 to 1.2 μM in SK-HEP-1 cells and HeLa cells, it selectively elevates p21WAF1/CIP1 levels and thereby arrests the cell cycle at G1/S phase by down-regulating Cyclin A–Cdk2 activity.[1]

Panaxadiol, a purified ginseng component, can enhance the anti-cancer effects of 5-fluorouracil in human colorectal cancer cells.[2]

Panaxadiol fraction and its ginsenosides can induce the antioxidant enzymes which are important for maintaining cell viability by lowering the level of oxygen radical generated from intracellular metabolism.[3]

Pretreatment with ginseng total saponin, especially panaxatriol, ameliorates I/R-induced myocardial damage and this protection is caused by reducing oxidative stress.[4]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method][5]

Mobile phase: Acetonitrile -H2O=40:60 ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 230 nm.

[Storage]

2-8℃, Protected from air and light, refrigerate or freeze.

[References]

[1] Ying H J, Choi J S, Shin S, *et al. Carcinogenesis, 2003, 24(11):1767-72.*

[2] Li X L, Wang C Z, Mehendale S R, *et al. Cancer Chemoth. Pharm., 2009, 64(6): 1097-104.*

[3] Chang M S, Lee S G, Rho H M. *Phytother. Res., 1999, 13(8):641-4.*

[4] Kim T H, Lee S M. *Food Chem. Toxicol., 2010, 48(6):1516-20.*

[5] Shi L L, Qin W M, Zhu Z J, *et al. Physical Testing & Chemical Analysis, 2010, 46(5): 482-4.*

[Contact]

Address:
S5-3 Building, No. 111, Dongfeng Rd.,
Wuhan Economic and Technological Development Zone,
Wuhan, Hubei 430056,
China

Email: info@chemfaces.com
Tel: +86-27-84237783
Fax: +86-27-84254680
Web: www.chemfaces.com
Tech Support: service@chemfaces.com