Product Datasheet

Lupiwighteone

Catalog No. **BP-06873** · CAS **104691-86-3** · Form **free base** · Physical state **solid** · Color **Off-white to light yellow** · Version **1.0** · Revision **2026-11-16**

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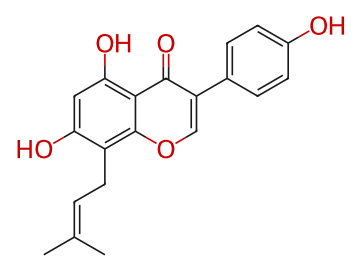
Target	Research area
Apoptosis	**Cancer**

Molecular formula	$C_{20}H_{18}O_5$
Molecular weight	**338.3539**

STRUCTURE



DESCRIPTION

Lupiwighteone is an isoflavone present widely in wild-growing plants, with antioxidant, antimicrobial and anticancer effects. Lupiwighteone induces caspase-dependent and -independent apoptosis on human breast cancer cells via inhibiting PI3K/Akt/mTOR pathway .

BIOLOGICAL ACTIVITY

In Vitro

Lupiwighteone (2-100 μM; 72 hours) shows cytotoxicity towards various cell lines, especially on DU-145 cells and SGC-7901 cells with IC50s of 23.7 μM and 21 μM, respectively[2].

Lupiwighteone (20-60 μM; 48 hours) induces (cell cycle arrest in DU-145 cells[2].

Lupiwighteone (20-60 μM; 48 hours) induces cells apoptosis[2].

Lupiwighteone (20-60 μM; 48 hours) decreases the cell cycle-related protein expressions in a dose-dependent manner in DU-145 cells[2].

Lupiwighteone (20-60 μM; 48 hours) induces a dose-dependent increase in ROS production[2].

Lupiwighteone up-regulates of cytochrome c and caspase-3, and subsequent cleavage of PARP-1 and down-regulates of the p-Akt/Akt ratio and VEGF expression, suggests the activation of mitochondria-based intrinsic apoptosis in DU-145 cells[2].

SOLUBILITY

soluble in DMSO

REFERENCES

[1]. Won YS, et al. Lupiwighteone induces caspase-dependent and -independent apoptosis on human breast cancer cells via inhibiting PI3K/Akt/mTOR pathway. Food Chem Toxicol. 2020 Jan;135:110863.

[2]. Ren J, et al. Isoflavone lupiwighteone induces cytotoxic, apoptotic, and antiangiogenic activities in DU-145 prostate cancer cells. Anticancer Drugs. 2015 Jul;26(6):599-611.

[3]. Li XL, Sui L, Lin FH, Lian Y, Ai LZ, Zhang Y. Differential effects of genistein and 8-prenylgenistein on reproductive tissues in immature female mice. Pharm Biol. 2019;57(1):226-230.

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