

Product Data Sheet

Product Name: Tanshindiol C

Cat. No.: GC70538

Chemical Properties

Cas. No. 97465-71-9

Formula $C_{18}H_{16}O_5$

M.Wt 312.32

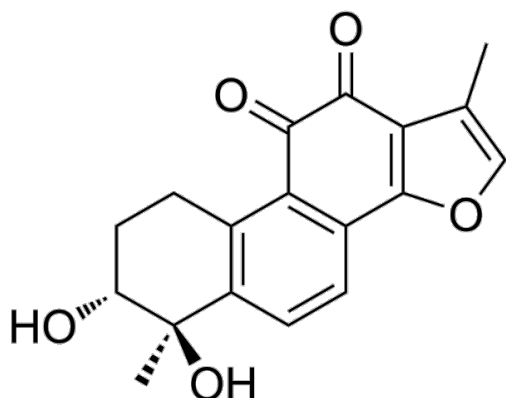
Solubility

Storage 4°C, protect from light

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.

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

Structure



Background

Tanshindiol C is a S-adenosylmethionine-competitive EZH2 (Histone Methyltransferase) inhibitor with an IC₅₀ of 0.55 μM for inhibiting the methyltransferase activity. Tanshindiol C is also an activator of both Nrf2 and Sirtuin 1 (Sirt1) in macrophages. Tanshindiol C possesses anti-cancer activity, and can be used for atherosclerosis research.

Tanshindiol C (1-10 μM; for 24 h) activates Nrf2 and upregulates Prdx1 expression and mRNA levels in macrophages. Tanshindiol C protects macrophages from oxidized low-density lipoprotein (oxLDL) induced foam cell formation via activation of Prdx1/ABCA1 signaling^[1].

Caution: Product has not been fully validated for medical applications. For research use only.

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Tanshindiol C inhibits both wild-type and A667G mutant (K_i value of 176 nM) EZH2 activity with similar potencies^[2].

Tanshindiol C inhibits growth of the cell lines such as Pfeiffer, U-2932 and Daudi (lymphoma), PC3 (prostate cancer), T98G and U87MG (glioma), and A549 (lung cancer), with GI_{50} values of 1.5 μ M, 9.5 μ M, 10.6 μ M, 4 μ M, 6 μ M, 5.7 μ M and 4.2 μ M, respectively^[2].

Tanshindiol C (1-5 μ M; 72 hours) induces accumulation of Pfeiffer cells in sub-G1 phase, which indicates cells in late apoptosis and necrosis^[2].

Tanshindiol C (1-3 μ M; 72 hours) increases protein levels of the important apoptosis related protein markers, cleaved caspase-3, caspase-7 and poly ADP-ribose polymerase (PRAP) in the cells. Tanshindiol C significantly decreases the levels of H3K27me3 in cells^[2].

References:

[1]. Yuyu Yang, et al. Tanshindiol C inhibits oxidized low-density lipoprotein induced macrophage foam cell formation via a peroxiredoxin 1 dependent pathway. *Biochim Biophys Acta Mol Basis Dis.* 2018 Mar;1864(3):882-890.

[2]. Jimin Woo, et al. Biological evaluation of tanshindiols as EZH2 histone methyltransferase inhibitors. *Bioorg Med Chem Lett.* 2014 Jun 1;24(11):2486-92.

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