Purdue Bioscience

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Data Sheet

Product Information

Catalog Number	BP15251
Product Name	Isocryptotanshinone
Description	Isocryptotanshinone inhibits protein tyrosine phosphatase 1B (PTP1B) activity with 50% inhibitory concentration values of 56.1±6.3 μM, PTP1B acts as a negative regulator of insulin signaling, and selective inhibition of PTP1B has served as a potential drug target for the treatment of type 2 diabetes.
In vitro	The antiproliferative effect of ICTS was determined using 3-(4,5-dimethyl-2-thiazolyl)-2,5-diphenyl-2-H-tetrazolium bromide (MTT) and clonogenic assays. The effect of ICTS on the cell cycle was measured using flow cytometry. Apoptosis was determined by Hoechst 33342 staining, DNA fragmentation assays, and Western blotting for apoptotic proteins. Finally, the effect of ICTS on mitogen-activated protein kinases (MAPKs) was determined by Western blotting. ICTS significantly inhibited proliferation of MCF-7 and MDA-MB-231 human breast cancer cells, HepG2 human liver cancer cells, and A549 human lung cancer cells in vitro. Among the tested cell lines, MCF-7 cells showed the highest sensitivity to ICTS. ICTS significantly inhibited colony formation by MCF-7 cells. Furthermore, exposure of MCF-7 cells to ICTS induced cell cycle arrest at the G1 phase and decreased mitochondrial membrane potential. Hoechst 33342 staining and Western blot analysis for apoptotic proteins suggested that ICTS induced apoptosis in MCF-7 cells. In addition, ICTS activated MAPK signaling in MCF-7 cells by inducing time- and concentration-dependent phosphorylation of JNK, ERK, and p38 MAPK.
CAS No.	22550-15-8
Chemical Formula	C19H20O3
Molecular Weight	296.366

Solubility	
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

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