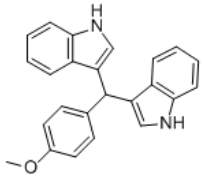
Product Data Sheet

Product Name: DIM-C-pPhOCH3
Cat. No.: GC32884

Chemical Properties

Cas. No.	33985-68-1		
SMILES	COC1=CC=C(C(C2=CNC3=C2C=CC=C3)C4=CNC5=C4C=CC=C5)C=C1		
Formula	$C_{24}H_{20}N_2O$	M.Wt	352.43
Solubility	DMSO : ≥ 33.3 mg/mL (94.49 mM)	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.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			



Protocol

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Cell experiment: RKO cells are treated with DMSO or 12.5 μM DIM-C-pPhOCH3 for 2 and 6 h. RNA is isolated for the reverse transcription-PCR (RT-PCR) experiment and analyzed for gene expression, and three replicates are determined for each time point and the DMSO control. The microarray data are analyzed[1].

Animal experiment: Mice[1]Male athymic nude mice (Foxn1nu, ages 7-8 weeks) are used. The mice are housed and maintained in laminar flow cabinets under specific pathogen-free conditions. A xenograft is established by s.c. injection of in vitro cultured RKO cells (5×106 per 150 μL) into the flanks of individual mice. Tumors are allowed to grow for 4 days until tumors are palpable. Mice are then randomized into two groups of six mice per group and dosed by oral gavage with either corn oil or 25 mg/kg/d DIM-C-pPhOCH3 for 21 days. The mice are weighed, and tumor size is measured[1].

References:

[1]. Cho SD, et al. Nur77 agonists induce proapoptotic genes and responses in colon cancer cells through nuclear receptor-dependent and nuclear receptor-independent pathways. Cancer Res. 2007 Jan 15;67(2):674-83.

Background

DIM-C-pPhOCH3 is a Nur77 agonist. Nerve growth factor-induced Bα (NGFI-Bα, Nur77) is an orphan nuclear receptor.

DIM-C-pPhOCH3 decreases survival and induces apoptosis in RKO colon cancer cells, and this is accompanied by induction of tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) protein. DIM-C-pPhOCH3 also induces Nur77-independent apoptosis. DIM-C-pPhOCH3 (10 μM) inhibits cell growth after treatment for 24, 48, or 72 h, and the maximum inhibitory response is observed after 72 h, where there is considerable cell detachment and dead cells. The growth-inhibitory effects observed for DIM-C-pPhOCH3 after 72 h are also accompanied by several markers of apoptosis, including PARP cleavage and cleavage of caspase-3, caspase-9, and caspase-8. PARP cleavage is

also observed after treatment of RKO cells for 48 h with DIM-C-pPhOCH3[1].

DIM-C-pPhOCH3 (25 mg/kg/d) also inhibits tumor growth in athymic nude mice bearing RKO cell xenografts. The effects of DIM-C-pPhOCH3 (25 mg/kg/d) on colon tumor growth are also investigated in athymic nude mice bearing RKO cell xenografts. Treatment with the DIM-C-pPhOCH3 significantly decreases tumor volumes and final tumor weights compared with corn oil controls[1].

[1]. Cho SD, et al. Nur77 agonists induce proapoptotic genes and responses in colon cancer cells through nuclear receptor-dependent and nuclear receptor-independent pathways. Cancer Res. 2007 Jan 15;67(2):674-83.