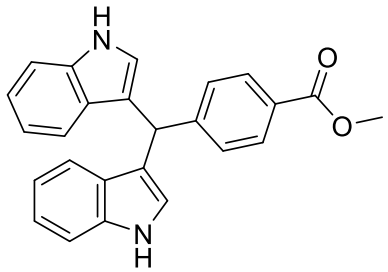
Product data sheet

MedKoo Cat#: 555482 Name: DIM-C-pPhCO2Me CAS#: 151358-48-4 Chemical Formula: $C_{25}H_{20}N_2O_2$ Exact Mass: 380.1525 Molecular Weight: 380.447	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
DIM-C-pPhCO2Me is a nuclear receptor 4A1 (NR4A1) antagonist with antineoplastic activity.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	100.5	264.16
Ethanol	38.0	99.88

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	2.63 mL	13.14 mL	26.29 mL
5 mM	0.53 mL	2.63 mL	5.26 mL
10 mM	0.26 mL	1.31 mL	2.63 mL
50 mM	0.05 mL	0.26 mL	0.53 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Hedrick E, Lee SO, Safe S. The nuclear orphan receptor NR4A1 regulates β1-integrin expression in pancreatic and colon cancer cells and can be targeted by NR4A1 antagonists. Mol Carcinog. 2017 Sep;56(9):2066-2075. doi: 10.1002/mc.22662. Epub 2017 May 9. PMID: 28418095; PMCID: PMC5546981.
2. Lacey A, Hedrick E, Li X, Patel K, Doddapaneni R, Singh M, Safe S. Nuclear receptor 4A1 (NR4A1) as a drug target for treating rhabdomyosarcoma (RMS). Oncotarget. 2016 May 24;7(21):31257-69. doi: 10.18632/oncotarget.9112. PMID: 27144436; PMCID: PMC5058754.

In vivo study

1. Guo H, Golczer G, Wittner BS, Langenbucher A, Zachariah M, Dubash TD, Hong X, Comaills V, Burr R, Ebright RY, Horwitz E, Vuille JA, Hajizadeh S, Wiley DF, Reeves BA, Zhang JM, Niederhoffer KL, Lu C, Wesley B, Ho U, Nieman LT, Toner M, Vasudevan S, Zou L, Mostoslavsky R, Maheswaran S, Lawrence MS, Haber DA. NR4A1 regulates expression of immediate early genes, suppressing replication stress in cancer. Mol Cell. 2021 Oct 7;81(19):4041-4058.e15. doi: 10.1016/j.molcel.2021.09.016. PMID: 34624217; PMCID: PMC8549465.

7. Bioactivity
Biological target:

DIM-C-pPhCO2Me is a nuclear receptor 4A1 (NR4A1) antagonist.

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In vitro activity

This study also investigated the antimigratory effects of DIM-C-pPhCO2Me in pancreatic cancer cells after knockdown of NR4A1 or β1-integrin. DIM-C-pPhCO2Me decreased migration; however, in cells depleted of NR4A1 or β1-integrin minimum inhibition was observed in cells after treatment with DIM-C-pPhCO2Me (Fig. 4A) and similar results were observed in colon cancer cells (Fig. 4B) and also with DIM-C-pPhOH (Suppl. Fig. S2).

Reference: Mol Carcinog. 2017 Sep;56(9):2066-2075. https://pubmed.ncbi.nlm.nih.gov/28418095/

In vivo activity

This study treated BRx142-generated orthotopic tumors with the bis-indole-derived NR4A1 antagonist DIM-C-pPhCO_2Me (NR4A1-i), which suppresses migration and induces cell death in breast cancer cells. Compared with vehicle, NR4A1-i caused tumor shrinkage (Figure 6E). Residual tumors in NR4A1-i-treated mice have elevated *FOS* expression, increased levels of the DNA damage marker γH2AX, and decreased expression of Ki-67 (Figures 6F and 6G).

Reference: Mol Cell. 2021 Oct 7;81(19):4041-4058.e15. https://pubmed.ncbi.nlm.nih.gov/34624217/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.