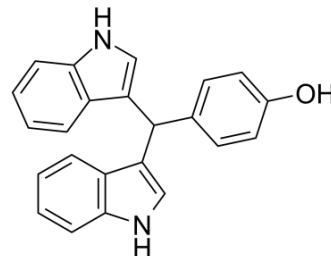


## DIM-C-pPhOH

<b>Cat. No.:</b>	HY-112055		
<b>CAS No.:</b>	151358-47-3		
<b>Molecular Formula:</b>	C <sub>23</sub> H <sub>18</sub> N <sub>2</sub> O		
<b>Molecular Weight:</b>	338.4		
<b>Target:</b>	Apoptosis		
<b>Pathway:</b>	Apoptosis		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 250 mg/mL (738.77 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM		2.9551 mL	14.7754 mL	29.5508 mL
		5 mM		0.5910 mL	2.9551 mL	5.9102 mL
10 mM			0.2955 mL	1.4775 mL	2.9551 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.08 mg/mL (6.15 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (6.15 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.08 mg/mL (6.15 mM); Clear solution</li> </ol>					

### BIOLOGICAL ACTIVITY

<b>Description</b>	DIM-C-pPhOH is a nuclear receptor 4A1 (NR4A1) antagonist. DIM-C-pPhOH inhibits cancer cell growth and mTOR signaling, induce apoptosis and cellular stress. DIM-C-pPhOH reduces cell proliferation with IC <sub>50</sub> values of 13.6 μM and 13.0 μM for ACHN cells and 786-O cells, respectively <sup>[1]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	Nuclear receptor 4A1 (NR4A1) <sup>[1]</sup>
<b>In Vitro</b>	DIM-C-pPhOH (7.5-20 μM; 24 hours; ACHN and 786-O cells) treatment significantly decreases cell proliferation <sup>[1]</sup> .

DIM-C-pPhOH (20  $\mu$ M; 24 hours; ACHN and 786-O cells) treatment induces Annexin V staining in ACHN and 786-O cells, confirming that DIM-C-pPhOH induce apoptosis, and also induces cleavage of caspases 7 and 8<sup>[1]</sup>.

DIM-C-pPhOH (15-20  $\mu$ M; 24 hours; ACHN and 786-O cells) treatment inhibits NR4A1-regulated expression of survivin, bcl-2 and EGFR in ACHN and 786-O cells. And also induces sestrin 2, activates AMPK $\alpha$  and inhibits activation of mTOR and downstream kinases<sup>[1]</sup>.

DIM-C-pPhOH decreases expression of  $\beta$ 1-integrin protein and mRNA and  $\beta$ 1-integrin-dependent responses in MCF7, MDA-MB-231, and SKBR3 cells and also inhibits migration of the latter two cell lines<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### Cell Proliferation Assay<sup>[1]</sup>

Cell Line:	ACHN and 786-O cells
Concentration:	7.5 $\mu$ M, 15 $\mu$ M, 20 $\mu$ M
Incubation Time:	24 hours
Result:	Significantly decreased cell proliferation.

#### Apoptosis Analysis<sup>[1]</sup>

Cell Line:	ACHN and 786-O cells
Concentration:	20 $\mu$ M
Incubation Time:	24 hours
Result:	Induced apoptosis in ACHN and 786-O cells.

#### Western Blot Analysis<sup>[1]</sup>

Cell Line:	ACHN and 786-O cells
Concentration:	15 $\mu$ M, 20 $\mu$ M
Incubation Time:	24 hours
Result:	Inhibited NR4A1-regulated expression of survivin, bcl-2 and EGFR in ACHN and 786-O cells. And also induced sestrin 2, activated AMPK $\alpha$ and inhibited activation of mTOR and downstream kinases.

#### In Vivo

DIM-C-pPhOH (30 mg/kg; oral gavage; daily; for 50 days; male athymic nude mice) treatment results in a significant inhibition of tumor growth<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male athymic nude mice (aged 6-7 weeks) injected with ACHN cells <sup>[1]</sup>
Dosage:	30 mg/kg/day
Administration:	Oral gavage; daily; for 50 days
Result:	Resulted in a significant inhibition of tumor growth.

## REFERENCES

[1]. Hedrick E, et al. Nuclear Receptor 4A1 (NR4A1) as a Drug Target for Renal Cell Adenocarcinoma. PLoS One. 2015 Jun 2;10(6):e0128308.

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

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