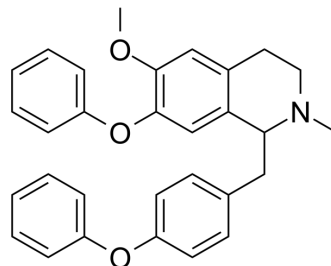


## SG-094

<b>Cat. No.:</b>	HY-148816
<b>CAS No.:</b>	2922283-37-0
<b>Molecular Formula:</b>	C <sub>30</sub> H <sub>29</sub> NO <sub>3</sub>
<b>Molecular Weight:</b>	451.56
<b>Target:</b>	Calcium Channel
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling
<b>Storage:</b>	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	Methanol : 125 mg/mL (276.82 mM; Need ultrasonic)					
	DMSO : 100 mg/mL (221.45 mM; Need ultrasonic)					
		Mass				
	Solvent	Concentration	1 mg	5 mg	10 mg	
<b>Preparing Stock Solutions</b>	1 mM	5 mM	10 mM	2.2145 mL	11.0727 mL	22.1455 mL
	5 mM	10 mM	2.2145 mL	4.4291 mL	8.8582 mL	
	10 mM	2.2145 mL	1.1073 mL	2.2145 mL	4.4291 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (5.54 mM); Clear solution  2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.54 mM); Clear solution					

### BIOLOGICAL ACTIVITY

<b>Description</b>	SG-094 is a potent TPC2 inhibitor with antiproliferative effects. SG-094 can be used for the research of cancer <sup>[1]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	TPC2 <sup>[1]</sup>
<b>In Vitro</b>	<p>SG-094 (72 hours) shows antiproliferative effects against RIL175 cells, with an IC<sub>50</sub> of 3.7 μM<sup>[1]</sup>.</p> <p>SG-094 (10 μM) blocks PI(3,5)P<sub>2</sub>-elicited TPC2 currents on isolated endolysosomes from HEK293 cells expressing TPC2-EGFP<sup>[1]</sup>.</p> <p>SG-094 (10 μM; pretreated for 1 h) significantly reduces VEGF-induced phosphorylation of eNOS, JNK, MAPK, and AKT without decreasing their total protein levels in HUVECs<sup>[1]</sup>.</p> <p>SG-094 (1-5 μM; pretreated for 1 h) increases OCR/ECAR ratios of RIL175 WT cells after glucose starvation<sup>[1]</sup>.</p>

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

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

Cell Line:	HUVECs
Concentration:	10 $\mu$ M
Incubation Time:	Pretreated for 1 h before stimulation with VEGF-A <sub>165</sub> for 15 min
Result:	Significantly reduced VEGF-induced phosphorylation of several downstream targets, such as eNOS, JNK, MAPK, and AKT.

#### In Vivo

SG-094 (90 nmol/kg; every 2-3 days over a 10-day timescale) inhibits hepatocellular carcinoma (HCC) tumor growth in mice [1].

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Animal Model:	C57Bl/6-Tyr mice were injected with RIL175 WT cells <sup>[1]</sup>
Dosage:	90 nmol/kg
Administration:	Every 2-3 days over a 10-day timescale
Result:	Inhibited tumor growth.

## REFERENCES

[1]. Müller M, et, al. Gene editing and synthetically accessible inhibitors reveal role for TPC2 in HCC cell proliferation and tumor growth. Cell Chem Biol. 2021 Aug 19;28(8):1119-1131.e27.

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

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