产品名称：**MCB-613**
产品别名：**MCB-613**

生物活性：

Description	MCB-613 is a potent Steroid receptor coactivator SRC small molecule 'stimulator' (SMS), super-stimulates SRCs' transcriptional activity. MCB-613 increases SRCs' interactions with other coactivators and markedly induces ER stress coupled to the generation of reactive oxygen species (ROS). MCB-613 is a SMS that target oncogenes can be exploited as anti-cancer agents by over-stimulating the SRC oncogenic program[1].

In Vitro

MCB-613 (6-8 μM; 24 hours) activates endogenous MMP13 mRNA expression in MDA-MB-231 cells[1].

MCB-613 (2-10 μM; 4 hours) leads to proteasome dysfunction and ER stress, the induction of the markers for unfolded protein response (UPR), including the phosphorylation of eIF2α and IRE1α as well as the induction of ATF4 protein expression[1].

MCB-613 (0-7 μM; 4 hours) affects SRC-3 KO and WT HeLa cell viability, SRC-3 WT HeLa cell is more affected by MCB-613 compared with KO cells[1].

RT-PCR[1]

Cell Line:	MDA-MB-231 cells
Concentration:	6 μM; 8 μM
Incubation Time:	24 hours
Result:	Increased MMP13 mRNA expression.

Western Blot Analysis[1]

Cell Line:	HeLa cells
Concentration:	2 μM; 4 μM; 6 μM; 8 μM; 10 μM
Incubation Time:	24 hours
Result:	Induced the p-eIF2α, p-IRE1α, and ATF-4 protein expression.

Cell Viability Assay[1]

Cell Line:	SRC-3 KO and WT HeLa cells
Concentration:	3 μM; 4 μM; 5 μM; 6 μM; 7 μM
Incubation Time:	24 hours
Result:	Decreased SRC-3 KO and WT HeLa cell viability.

In Vivo

MCB-613 (intravenous injection; 20 mg/kg; 3 times/week; 7 weeks) significantly and dramatically stalls the growth of the tumor compared with the control group and causes no obvious animal toxicity[1]

Animal Model:	MCF-7 breast cancer mouse xenograft model (athymic nude mice by injecting MCF-7 cells into mammary fat pads)[1]
Dosage:	20 mg/kg
Administration:	Intravenous injection; 20 mg/kg; 3 times/week; 7 weeks
Result:	Inhibited tumor growth in vivo.

In Vitro:

DMSO : 50 mg/mL (**164.26 mM;** Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.2853 mL	16.4263 mL	32.8526 mL

<table>
<tr><td rowspan="3">Solvent&Solubility</td><td rowspan="2">Stock Solutions</td><td>5 mM</td><td>0.6571 mL</td><td>3.2853 mL</td><td>6.5705 mL</td></tr>
<tr><td>10 mM</td><td>0.3285 mL</td><td>1.6426 mL</td><td>3.2853 mL</td></tr>
<tr><td colspan="5">*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。
储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。
In Vivo:
请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液，再依次添加助溶剂：
——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶
1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline
Solubility: ≥ 2.5 mg/mL (8.21 mM); Clear solution
此方案可获得 ≥ 2.5 mg/mL (8.21 mM，饱和度未知) 的澄清溶液。
以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。

2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (8.21 mM); Clear solution
此方案可获得 ≥ 2.5 mg/mL (8.21 mM，饱和度未知) 的澄清溶液。
以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。

3.请依序添加每种溶剂： 10% DMSO →90% corn oil
Solubility: ≥ 2.5 mg/mL (8.21 mM); Clear solution
此方案可获得 ≥ 2.5 mg/mL (8.21 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。
以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。</td></tr>
<tr><td>References</td><td colspan="5">[1]. Wang L, et al. Characterization of a Steroid Receptor Coactivator Small Molecule Stimulator that Overstimulates Cancer Cells and Leads to Cell Stress and Death. Cancer Cell. 2015 Aug 10;28(2):240-52.</td></tr>
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