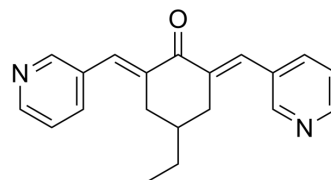


MCB-613

Cat. No.:	HY-19625												
CAS No.:	1162656-22-5												
Molecular Formula:	C ₂₀ H ₂₀ N ₂ O												
Molecular Weight:	304.39												
Target:	Reactive Oxygen Species												
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB												
Storage:	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>2 years</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 year</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	2 years		-20°C	1 year
Powder	-20°C	3 years											
	4°C	2 years											
In solvent	-80°C	2 years											
	-20°C	1 year											



SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (164.26 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.2853 mL	16.4263 mL	32.8526 mL
		5 mM	0.6571 mL	3.2853 mL	6.5705 mL
10 mM		0.3285 mL	1.6426 mL	3.2853 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (8.21 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.21 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.21 mM); Clear solution 				

BIOLOGICAL ACTIVITY

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 eIF2 α and IRE1 α as well as the induction of ATF4 protein expression^[1].
 MCB-613 (0-7 μ M; 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].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.
 RT-PCR^[1]

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

Western Blot Analysis^[1]

Cell Line:	HeLa cells
Concentration:	2 μ M; 4 μ M; 6 μ M; 8 μ M; 10 μ M
Incubation Time:	24 hours
Result:	Induced the p-eIF2 α , p-IRE1 α , and ATF-4 protein expression.

Cell Viability Assay^[1]

Cell Line:	SRC-3 KO and WT HeLa cells
Concentration:	3 μ M; 4 μ M; 5 μ M; 6 μ M; 7 μ M
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]
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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.

REFERENCES

[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.

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

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