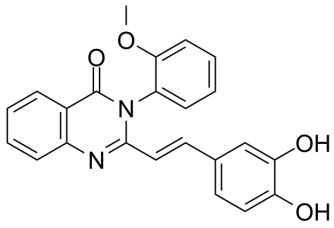
ICCB280

Cat. No.:	HY-134333
CAS No.:	2041072-41-5
Molecular Formula:	$C_{23}H_{18}N_2O_4$
Molecular Weight:	386.4
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 83.33 mg/mL (215.66 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5880 mL	12.9400 mL	25.8799 mL
	5 mM	0.5176 mL	2.5880 mL	5.1760 mL
	10 mM	0.2588 mL	1.2940 mL	2.5880 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.38 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.38 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ICCB280 is a potent inducer of C/EBPα. ICCB280 exhibits anti-leukemic properties including terminal differentiation, proliferation arrest, and apoptosis through activation of C/EBPα and affecting its downstream targets (such as C/EBPε, G-CSFR and c-Myc)[1][2].

IC_{50} & Target

C/EBPα[1]

In Vitro

ICCB280 (0.1-50 μM; 48 h) suppresses the HL-60 cell growth, with an IC_{50} of 8.6 μM[1].
ICCB280 (10 μM; 2-8 d) increases the C/EBPα expression (mRNA and protein) and modulates its target genes in HL-60 cells[1].
ICCB280 (10 μM; 7 d) induces granulocytic differentiation and subsequent apoptosis in HL-60 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	HL-60 cells
Concentration:	0.1, 0.5, 1, 5, 10, 50 μM
Incubation Time:	48 hours
Result:	Induced cell growth arrest, with an IC_{50} of 8.6 μM.

Western Blot Analysis[1]

Cell Line:	HL-60 cells
Concentration:	10 μM
Incubation Time:	2, 4, 6, 8 days
Result:	Upregulated the C/EBPα protein on day 4. Increased the C/EBPε expression on day 6. No changes in C/EBPβ expression through the 8 days of the experiment.

REFERENCES

[1]. Radomska HS, et, al. A Cell-Based High-Throughput Screening for Inducers of Myeloid Differentiation. J Biomol Screen. 2015 Oct;20(9):1150-9.

[2]. Sridhar R, et, al. Styryl Quinazolinones as Potential Inducers of Myeloid Differentiation via Upregulation of C/EBPα. Molecules. 2018 Aug 3;23(8):1938.

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