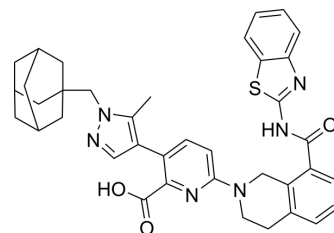


## A-1331852

<b>Cat. No.:</b>	HY-19741		
<b>CAS No.:</b>	1430844-80-6		
<b>Molecular Formula:</b>	C <sub>38</sub> H <sub>38</sub> N <sub>6</sub> O <sub>3</sub> S		
<b>Molecular Weight:</b>	658.81		
<b>Target:</b>	Bcl-2 Family		
<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

#### In Vitro

DMSO : ≥ 50 mg/mL (75.89 mM)  
 Ethanol : 4 mg/mL (6.07 mM; ultrasonic and warming and heat to 60°C)  
 H<sub>2</sub>O : < 0.1 mg/mL (ultrasonic;warming;heat to 80°C) (insoluble)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.5179 mL	7.5894 mL	15.1789 mL
	5 mM	0.3036 mL	1.5179 mL	3.0358 mL
	10 mM	0.1518 mL	0.7589 mL	1.5179 mL

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

#### In Vivo

- Add each solvent one by one: 2.5% DMSO >> 10% Ethanol >> 27.5% PEG300 >> 60% Phosal 50 PG  
Solubility: ≥ 2.5 mg/mL (3.79 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: 2.08 mg/mL (3.16 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: 2.08 mg/mL (3.16 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (3.16 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

A-1331852 is an orally available BCL-XL selective inhibitor with a K<sub>i</sub> of less than 10 pM.

<b>IC<sub>50</sub> &amp; Target</b>	Bcl-xL 0.01 nM (Ki)	Bcl-W 4 nM (Ki)	Bcl-2 6 nM (Ki)	Mcl-1 142 nM (Ki)
<b>In Vitro</b>	A-1331852 selectively disrupts BCL-XL-BIM complexes and induces the hallmarks of apoptosis in BCL-XL-dependent Molt-4 cells with IC <sub>50</sub> s in the low nanomolar range but does not affect MEF cells lacking BAK or BAX. In CellTiter-Glo cell viability assay, A-1331852 inhibits NCI-H847, NCI-H1417, SET-2, HEL, OCI-M2 with EC <sub>50</sub> values of 3, 7, 80, 120 and 100 nM <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
<b>In Vivo</b>	A-1331852 demonstrates antitumor efficacy in the Molt-4 xenograft model, inducing tumor regressions as a single agent. Additionally, A-1331852 combines with venetoclax to recapitulate the efficacy of navitoclax in the NCI-H1963.FP5 xenograft model of SCLC. A-1331852 significantly inhibits tumor growth in seven subcutaneous xenograft models of solid tumors, including breast cancer, NSCLC, and ovarian cancer <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			

## PROTOCOL

<b>Cell Assay</b> <sup>[1]</sup>	SCLC and AML cell lines are incubated with increasing concentrations of navitoclax, venetoclax, or A-1155463 for 48 hours before assessing cell viability. Cell killing EC <sub>50</sub> values are calculated <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>Animal Administration</b> <sup>[1]</sup>	Mice: The growth inhibition of established tumors in SCID-bg mice is studied. A-1331852 is administered orally daily for 14 days at 25 mg/kg and RP-56976 is administered intravenously at 7.5 mg/kg. The change of tumor volume is monitored daily <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Nature. 2023 Jan;613(7942):187-194.
- Nature. 2021 Mar;591(7850):477-481.
- Cell. 2022 Apr 28;185(9):1521-1538.e18.
- Cell Res. 2023 May 11.
- Nature Cancer. 2021 Jan;2(1):34-48.

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## REFERENCES

[1]. Levenson JD, et al. Exploiting selective BCL-2 family inhibitors to dissect cell survival dependencies and define improved strategies for cancer therapy. Sci Transl Med. 2015 Mar 18;7(279):279ra40.

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

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