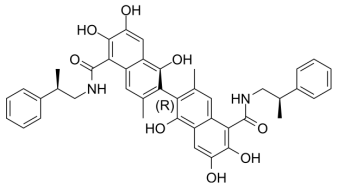
Sabutoclax

Cat. No.:	HY-15191
CAS No.:	1228108-65-3
Molecular Formula:	$C_{42}H_{40}N_2O_8$
Molecular Weight:	700.78
Target:	Bcl-2 Family
Pathway:	Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 36.67 mg/mL (52.33 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.4270 mL	7.1349 mL	14.2698 mL
5 mM	0.2854 mL	1.4270 mL	2.8540 mL
10 mM	0.1427 mL	0.7135 mL	1.4270 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.75 mg/mL (3.92 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sabutoclax is a potent and effective Bcl-2 Family (Bcl-2, Bcl-XL, Mcl-1, Bfl-1) inhibitor with IC_{50}s of 0.32 μM, 0.31 μM, 0.20 μM, and 0.62 μM, respectively. Sabutoclax increases Bax, Bim, PUMA and survivin expression[1][2].

IC_{50} & Target

Bcl-xL	BCL2	Mcl-1	Bfl-1
0.31 μM (IC_{50})	0.32 μM (IC_{50})	0.2 μM (IC_{50})	0.62 μM (IC_{50})

In Vitro

Sabutoclax (0.001-10 μM; 72 h) potentially inhibits cell growth of human prostate cancer, lung cancer cell line[1].
Sabutoclax (0.01 μM-1 μM; 24-48 h) potentially induces cell apoptosis in human diffuse large B-cell lymphoma cell line[1].
Sabutoclax (0 μM-15 μM; 48 h) uptrgulates the level of pro-apoptotic proteins in chemoresistent cells[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	PC-3 and H460
Concentration:	0.001 μM, 0.01 μM, 0.1 μM, 1 μM, 10 μM (PC-3), 0.05 μM, 0.1 μM, 1 μM, 5 μM, 10 μM (H460)
Incubation Time:	72 h
Result:	Showed effectively repressing cell growth in a dose-dependent manner.

Apoptosis Analysis[1]

Cell Line:	BP3 cell line
Concentration:	0.01 μM, 0.03 μM, 0.1 μM, 1 μM
Incubation Time:	24-48 h
Result:	Effectively induced apoptosis in a dose-dependent manner.

Western Blot Analysis[2]

Cell Line:	MCF-7/A02, and CALDOX cells
Concentration:	0 μM, 7.5 μM, 15 μM (MCF-7/A02), 0 μM, 5 μM, 10 μM (CALDOX)
Incubation Time:	48 h
Result:	Showed increasing proteins level of Bax, Bim, PUMA and Survivin in a dose-dependent manner.

In Vivo

Sabutoclax (1-5 mg/kg; i.p.; every two days in 18 D) reduces tumor growth in M2182-bearing athymic nude mice[1].

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

Animal Model:	athymic nude mice with tumor xenografts from M2182 cells in s.c.
Dosage:	1 mg/kg, 3 mg/kg, 5 mg/kg
Administration:	Intraperitoneal injection (i.p.)
Result:	Showed ihibiting tumor growth to about 60% of the tumor volume.

REFERENCES

[1]. Yunhui Hu, et Al. Sabutoclax, pan-active BCL-2 protein family antagonist, overcomes drug resistance and eliminates cancer stem cells in breast cancer. Cancer Lett. 2018 Jun 1:423:47-59.

[2]. Wei J , et al. BI-97C1, an optically pure Apogossypol derivative as pan-active inhibitor of antiapoptotic B-cell lymphoma/leukemia-2 (Bcl-2) family proteins. J Med Chem. 2010 May 27; 53(10):4166-76.

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

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