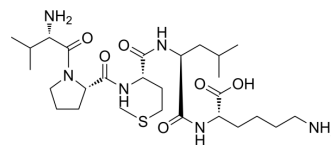


Bax inhibitor peptide V5

Cat. No.:	HY-P0081
CAS No.:	579492-81-2
Molecular Formula:	C ₂₇ H ₅₀ N ₆ O ₆ S
Molecular Weight:	586.79
Sequence Shortening:	VPMLK
Target:	Bcl-2 Family; Apoptosis
Pathway:	Apoptosis
Storage:	Sealed storage, away from moisture
	Powder -80°C 2 years
	-20°C 1 year



* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (170.42 mM)
 H₂O : 100 mg/mL (170.42 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.7042 mL	8.5209 mL	17.0419 mL
	5 mM	0.3408 mL	1.7042 mL	3.4084 mL
	10 mM	0.1704 mL	0.8521 mL	1.7042 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (170.42 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (4.26 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (4.26 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (4.26 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Bax inhibitor peptide V5 (BIP-V5) is a Bax-mediated apoptosis inhibitor, used for cancer treatment.

IC₅₀ & Target	Bax
In Vitro	Bax inhibitor peptide V5 (BIP-V5; 0-50 μ M) reduces cell death in STF-cMyc cells but not in SW620 or NCI-H23 cells. BIPV5 does not result in any significant effect on cell cycle arrest at the G2/M phase ^[1] . V5 treatment upregulates expression of anti-apoptotic proteins Bcl-2 and XIAP by more than 3- and 11-fold and downregulates expression of apoptosis-inducing proteins Bax, Bad, and nuclear factor- κ B-p65 by 10, 30, and nearly 50%, respectively ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Bax inhibitor peptide V5 (BIP-V5; 100 μ M) significantly improves islet function following isolation and improves islet graft function following transplantation in mice model ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[1]

Cells (2.5×10^4 cells/mL) are grown in 96-well plates in a final volume of 100 μ L/well. After 24 h, cells are incubated with small molecules or vehicle (DMSO) for 48-96 h prior to harvest. 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide, a tetrazole (MTT) reagent (0.5 mg/mL), is added to each well during the final 2 h, and absorbance is measured. Cell growth is calculated as the ratio of absorbance obtained upon compound treatment to that obtained with vehicle (DMSO) treatment. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Environ Int. 2024 Feb;184:108480.
- Cell Death Dis. 2022 Mar 2;13(3):197.
- Biomed Pharmacother. 2023 Nov 16;169:115893.
- Apoptosis. 2022 Feb 4.
- Int J Cancer. 2020 Apr 1;146(7):1963-1978.

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REFERENCES

[1]. Jo MJ, et al. Regulation of cancer cell death by a novel compound, C604, in a c-Myc-overexpressing cellular environment. Eur J Pharmacol. 2015 Dec 15;769:257-65.

[2]. Rivas-Carrillo JD, et al. Cell-permeable pentapeptide V5 inhibits apoptosis and enhances insulin secretion, allowing experimental single-donor islet transplantation in mice. Diabetes. 2007 May;56(5):1259-67. Epub 2007 Feb 7.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA