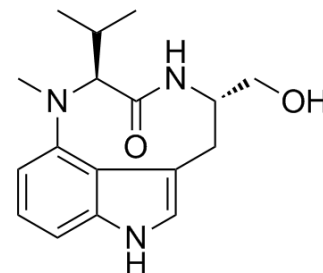


(-)-Indolactam V

Cat. No.:	HY-12307		
CAS No.:	90365-57-4		
Molecular Formula:	C ₁₇ H ₂₃ N ₃ O ₂		
Molecular Weight:	301.38		
Target:	PKC		
Pathway:	Epigenetics; TGF-beta/Smad		
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 : 50 mg/mL (165.90 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		3.3181 mL	16.5904 mL	33.1807 mL
		5 mM		0.6636 mL	3.3181 mL	6.6361 mL
10 mM			0.3318 mL	1.6590 mL	3.3181 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 (8.30 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	(-)-Indolactam V is a PKC activator, with K _s of 3.36 nM, 1.03 μM for η-CRD2 (PKCη surrogate peptide), γ-CRD2 (PKCγ surrogate peptide), and K _d s of 5.5 nM (η-C1B), 7.7 nM (ε-C1B), 8.3 nM (δ-C1B), 18.9 nM (β-C1A-long), 20.8 nM (α-C1A-long), 137 nM (β-C1B), 138 nM (γ-C1A), 213 nM (γ-C1B), and has antitumor activity.
IC₅₀ & Target	Ki: 3.36 nM (η-CRD2 (PKCη surrogate peptide)), 1.03 μM (γ-CRD2 (PKCγ surrogate peptide)) ^[1] Kd: 5.5 nM (η-C1B), 7.7 nM (ε-C1B), 8.3 nM (δ-C1B), 18.9 nM (β-C1A-long), 20.8 nM (α-C1A-long), 137 nM (β-C1B), 138 nM (γ-C1A), 213 nM (γ-C1B) ^[2]

In Vitro

(-)-Indolactam V is a PKC activator, with $K_{1/2}$ s of 3.36 nM, 1.03 μ M for η -CRD2 (PKC η surrogate peptide), γ -CRD2 (PKC γ surrogate peptide), and has antitumor activity^[1]. (-)-Indolactam V shows $K_{1/2}$ s of 5.5 nM (η -C1B), 7.7 nM (ϵ -C1B), 8.3 nM (δ -C1B), 18.9 nM (β -C1A-long), 20.8 nM (α -C1A-long), 137 nM (β -C1B), 138 nM (γ -C1A), 213 nM (γ -C1B), respectively^[2]. (-)-Indolactam V (20 nM-5 μ M) dose-dependently affects multiple hESC lines, such as HUES 2, 4 and 8. (-)-Indolactam V also increases the mRNA levels of Pdx1, HNF6, PTF1A, SOX9, HB9 and PROX1. In addition, (-)-Indolactam V (300 nM) functions in both mouse and human cells and confirms that some signals for pancreatic development^[3].

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

PROTOCOL

Cell Assay^[3]

For induced differentiation to endocrine or exocrine cells, the (-)-Indolactam V (300 nM)-treated populations are cultured in DMEM/F12 supplemented with 1 N₂, 2 mg/mL albumin fraction V and 10 ng/mL bovine FGF for the first 4 d. 10 mM nicotinamide is then added and maintained for an additional 8 d, changing the medium every 3 d^[3].

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

CUSTOMER VALIDATION

- Viruses. 2020 Jun 3;12(6):609.

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REFERENCES

[1]. Nakagawa Y, et al. Synthesis and biological activities of indolactone-V, the lactone analogue of the tumor promoter (-)-indolactam-V. *Biosci Biotechnol Biochem.* 1997 Aug;61(8):1415-7.

[2]. Masuda A, et al. Binding selectivity of conformationally restricted analogues of (-)-indolactam-V to the C1 domains of protein kinase C isozymes. *Biosci Biotechnol Biochem.* 2002 Jul;66(7):1615-7.

[3]. Chen S, et al. A small molecule that directs differentiation of human ESCs into the pancreatic lineage. *Nat Chem Biol.* 2009 Apr;5(4):258-65.

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

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