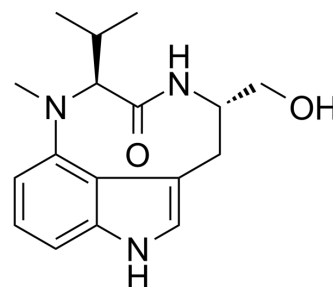


(-)-Indolactam V

| | |
|--------------------|--|
| 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 2 years -20°C 1 year |



SOLVENT & SOLUBILITY

| | | | | | | |
|---|--|--------------------------------------|-----------|------------|------------|-------|
| In Vitro | DMSO : 50 mg/mL (165.90 mM; Need ultrasonic) | | | | | |
| | Preparing Stock Solutions | <div>Solvent Concentration</div> | Mass | 1 mg | 5 mg | 10 mg |
| | | | | | | |
| | | 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 | 1. 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 | | | | | |
| | 2. 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 | | | | | |
| | 3. 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. |
| IC ₅₀ & Target | Ki: 3.36 nM (η-CRD2 (PKCη surrogate peptide)), 1.03 μM (γ-CRD2 (PKCγ surrogate peptide)) ^[1] K _d : 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_s 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_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), 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

- Adv Sci (Weinh). 2023 Nov 22:e2304987.
- 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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