CXJ-2

Cat. No.:	HY-149205
CAS No.:	2919976-92-2
Molecular Formula:	$C_{55}H_{87}N_{15}O_{22}$
Molecular Weight:	1310.37
Sequence:	cyclo(Val-{Iva}-Gly-Ser-Pro-Ser-Ala-Gln-Glu-Glu-Ala-Ser-Pro-Ala)
Sequence Shortening:	cyclo(V-{Iva}-GSPSAQEEASPA)
Target:	PI3K; ERK
Pathway:	PI3K/Akt/mTOR; MAPK/ERK Pathway; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	CXJ-2 is a cyclic peptide, and exhibits moderate affinity toward elastin derived peptides (EDPs). CXJ-2 exhibits potent activities to inhibit the PI3K/ERK pathway and decrease hepatic stellate cell proliferation and migration. CXJ-2 possesses potent antifibrotic efficacy[1].
IC_{50} & Target	PI3K; ERK
In Vitro	CXJ-2 (10 μM , 24 h) decreases α-SMA expression in a dose-dependent manner in LX2 cells[1]. CXJ-2 (10 μM , 24 h) exhibits superior activity to inhibit LX2 cell proliferation[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	CXJ-2 (150 μg/kg, IP, daily for 3 weeks) remarkably diminishes hepatic fibrosis in mice[1]. CXJ-2 (0.1 mg/kg, SC, single dose) shows favorable pharmacokinetic properties[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male C57BL/6J mice (6-8 weeks, 20-24 g, CCl_4-induced liver fibrosis model)[1]
Dosage:	150 μg/kg
Administration:	IP, daily, for 3 weeks
Result:	Significantly decreased the HYP (hydroxyproline) content in liver tissue. Decreased collagen deposition. Remarkably diminished hepatic fibrosis.

Animal Model:	Sprague-Dawley rats[1]
Dosage:	0.1 mg/kg
Administration:	SC, single dose (Pharmacokinetic Analysis)
Result:	Showed favorable pharmacokinetic properties (T_{max}=0.33 h, $T_{1/2}$=0.46 h), and displayed enhanced clearance profiles. Displayed significantly higher serum stability with a half-life

	longer than 36 h.

REFERENCES

[1]. Song N, et al. Design and Discovery of Novel Cyclic Peptides as EDPs-EBP Interaction Inhibitors for the Treatment of Liver Fibrosis. J Med Chem. 2023 Apr 13;66(7):4689-4702.

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

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