Epsilon-V1-2

Cat. No.:	HY-P0154
CAS No.:	182683-50-7
Molecular Formula:	$C_{37}H_{65}N_9O_{13}$
Molecular Weight:	843.96
Sequence Shortening:	EAVSLKPT
Target:	PKC
Pathway:	Epigenetics; TGF-beta/Smad
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Epsilon-V1-2 (ε-V1-2), a PKCε-derived peptide, is a selective PKCε inhibitor. Epsilon-V1-2 inhibits the translocationof PKCε, but not α-, β-, and δPKC[1].
IC_{50} & Target	PKCε
In Vitro	Epsilon-V1-2 (ε-V1-2), a PKCε-derived peptide containing the site for its specific receptor for activated C kinase (RACK), inhibits translocation of PKCε and reduces insulin response to glucose[1]. Epsilon-V1-2 (ε-V1-2; 1 μM, 24 hours) treatment significantly inhibits Oleic acid (OA)-induced connexin 43 (Cx43) Ser368 phosphorylation and prevents OA-induced gap junction disassembly in cardiomyocytes[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Epsilon-V1-2 (20 mg/kg/day; osmotic pumps; daily; for 4 weeks) treatment significantly improves the beating score in a murine heterotopic transplantation model. Epsilon-V1-2 reduces infiltration of macrophages and T cells into the cardiac grafts, and decreases parenchymal fibrosis. Epsilon-V1-2 treatment almost abolishes the rise in pro-fibrotic cytokine, TGF-β and monocyte recruiting chemokine MCP-1 levels[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6J mice transplanted the hearts of FVB mice[3]
Dosage:	20 mg/kg/day
Administration:	0.1 mL osmotic pumps implanted subcutaneously; daily; for 4 weeks
Result:	Significantly improved the beating score throughout the treatment.

REFERENCES

[1]. M Yedovitzky, et al. Translocation inhibitors define specificity of protein kinase C isoenzymes in pancreatic beta-cells. J Biol Chem. 1997 Jan 17;272(3):1417-20.

[2]. Yuahn-Sieh Huang, et al. Mechanism of oleic acid-induced gap junctional disassembly in rat cardiomyocytes. J Mol Cell Cardiol. 2004 Sep;37(3):755-66.

[3]. Tomoyoshi Koyanagi, et al. Pharmacological inhibition of epsilon PKC suppresses chronic inflammation in murine cardiac transplantation model. J Mol Cell Cardiol. 2007 Oct;43(4):517-22.

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