

FX-06

Cat. No.:	HY-106275
CAS No.:	88650-17-3
Molecular Formula:	C ₁₃₃ H ₂₁₆ N ₄₄ O ₃₈
Molecular Weight:	3039.41
Sequence Shortening:	GHRPLDKKREEAPSLRPAPPPISGGGYR
Target:	Flavivirus; Dengue virus
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	FX-06 (Fibrin-derived peptide Bβ15-42) is a fibrin Bbeta chain-derived peptide. FX-06 binds to VE-cadherin and inhibits leukocyte transmigration and initiates VE-cadherin-mediated signaling. FX-06 can be used in the research of ischemia/reperfusion injury, Dengue shock syndrome (DSS) ^{[1][2][4]} .																
In Vitro	FX-06 (50 μM, 3 days) inhibits the production of D2HG in HEK-293T cells transfected with IDH1 R132H ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.																
In Vivo	<p>FX06 (2.4 mg/kg, i.v. bolus) shows significantly improved pulmonary and circulatory function in a pig model of hemorrhagic shock and reperfusion^[3].</p> <p>FX06 (2.4 mg/kg, i.p., twice daily) improves survival and reduces capillary leak in mice with Dengue-induced shock^[4].</p> <p>FX06 (3.6 mg/kg, i.v.) protects mice from Ischemia/reperfusion (I/R)-induced kidney injury by aiding in epithelial cell proliferation and tissue repair^[5].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Pig model of hemorrhagic shock and reperfusion ^[3]</td> </tr> <tr> <td>Dosage:</td> <td>2.4 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intravenous injection (i.v.) bolus</td> </tr> <tr> <td>Result:</td> <td>Reduced accumulation of myeloperoxidase-pos. cells (mainly neutrophils) in myocardium, liver, and small intestine, and reduced interleukin-6 plasma levels.</td> </tr> </table> <table border="1"> <tr> <td>Animal Model:</td> <td>Mice with Dengue-induced shock^[4]</td> </tr> <tr> <td>Dosage:</td> <td>2.4 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection (i.p.)</td> </tr> <tr> <td>Result:</td> <td>Significantly improved survival rates, reduced capillary leak within lungs and the intestine, and reduced hemoconcentration and fibrinogen consumption.</td> </tr> </table>	Animal Model:	Pig model of hemorrhagic shock and reperfusion ^[3]	Dosage:	2.4 mg/kg	Administration:	Intravenous injection (i.v.) bolus	Result:	Reduced accumulation of myeloperoxidase-pos. cells (mainly neutrophils) in myocardium, liver, and small intestine, and reduced interleukin-6 plasma levels.	Animal Model:	Mice with Dengue-induced shock ^[4]	Dosage:	2.4 mg/kg	Administration:	Intraperitoneal injection (i.p.)	Result:	Significantly improved survival rates, reduced capillary leak within lungs and the intestine, and reduced hemoconcentration and fibrinogen consumption.
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REFERENCES

- [1]. Ahrens I, et al. FX-06, a fibrin-derived Bbeta15-42 peptide for the potential treatment of reperfusion injury following myocardial infarction. *Curr Opin Investig Drugs*. 2009 Sep;10(9):997-1003.
- [2]. Zou F, et al. Identification of novel allosteric inhibitors of mutant isocitrate dehydrogenase 1 by cross docking-based virtual screening. *Bioorg Med Chem Lett*. 2018 Feb 1;28(3):388-393.
- [3]. Roesner JP, et al. Bbeta15-42 (FX06) reduces pulmonary, myocardial, liver, and small intestine damage in a pig model of hemorrhagic shock and reperfusion. *Crit Care Med*. 2009 Feb;37(2):598-605.
- [4]. Gröger M, et al. Peptide Bbeta(15-42) preserves endothelial barrier function in shock. *PLoS One*. 2009;4(4):e5391.
- [5]. Aparna Krishnamoorthy, et al. Fibrinogen β -derived B β 15-42 peptide protects against kidney ischemia/ reperfusion injury. *Blood* (2011) 118 (7): 1934–1942.
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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