MMK1

Cat. No.:	HY-P1117
CAS No.:	271246-66-3
Molecular Formula:	$C_{75}H_{123}N_{19}O_{18}S$
Molecular Weight:	1610.96
Sequence:	Leu-Glu-Ser-Ile-Phe-Arg-Ser-Leu-Leu-Phe-Arg-Val-Met
Sequence Shortening:	LESIFRSLLFRVM
Target:	Formyl Peptide Receptor (FPR); Calcium Channel
Pathway:	GPCR/G Protein; Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	MMK1 is a potent and selective human formyl peptide receptor like-1 (FPRL-1/FPR2) agonist with EC_{50}s of <2 nM and >10000 nM for FPRL-1 and FPR1, respectively. MMK1 is a potent chemotactic and calcium-mobilizing agonist. MMK1 potently activates phagocytic leukocytes and enhances Pertussis Toxin (HY-112779)-sensitive production by human monocytes of proinflammatory cytokines IL-1b and IL-6. MMK1 exerts anxiolytic-like activity[1][2][3][4].
IC_{50} & Target	Calcium Channel
In Vitro	MMK-1 induces calcium mobilization in human FPRL1-transfected HEK 293 (FPRL1/293) cells with an EC_{50} of 2 nM[1]. MMK1 (1 μM; for 4 h) induces selective migration of FPR2-expressing RBL-2H3 cells[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	MMK1 (10-1000 pmol; ICV; 20 min before the test) exerts an aniolytic-exerted an anxiolytic-like activity at a dose of 100 pmol/mouse[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Four-week-old male ddY mice[4]
Dosage:	10, 100, 1000 pmol/mouse
Administration:	ICV; 20 min before the test
Result:	Exerted an aniolytic-exerted an anxiolytic-like activity at a dose of 100 pmol/mouse.

REFERENCES

[1]. C Klein, et al. Identification of surrogate agonists for the human FPRL-1 receptor by autocrine selection in yeast. Nat Biotechnol. 1998 Dec;16(13):1334-7.

[2]. Phuong Doan, et al. Alkylaminophenol and GPR17 Agonist for Glioblastoma Therapy: A Combinational Approach for Enhanced Cell Death Activity. Cells. 2021 Aug 3;10(8):1975.

[3]. Yoo Jung Park, et al. A novel antimicrobial peptide acting via formyl peptide receptor 2 shows therapeutic effects against rheumatoid arthritis. Sci Rep. 2018 Oct

2;8(1):14664.

[4]. Hui Zhao, et al. Rubimetide, humanin, and MMK1 exert anxiolytic-like activities via the formyl peptide receptor 2 in mice followed by the successive activation of DP1, A2A, and GABAA receptors. Peptides. 2016 Sep;83:16-20.

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