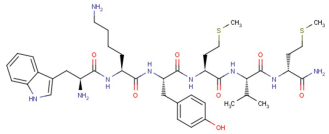
Data Sheet (Cat.No.T7484)

TargetMol
A DRUG SCREENING EXPERT

WKYMVM

Chemical Properties



CAS No.:	187986-17-0
Formula:	C41H61N9O7S2
Molecular Weight:	856.11
Appearance:	Solid
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	WKYMVM is a N-formyl peptide receptor (FPR1) agonist.
Targets(IC_{50})	FPR1 : None
In vitro	Neutrophils are activated by WKYMVM through FPRL1 and that FPRL2 is a chemotactic receptor transducing signals in myeloid cells[1].
In vivo	Using blood samples withdrawn from 28 AL patients and 31 healthy controls, found that, in the absence of exogenous WKYMVm, WKYMVm receptor and bactericidal activity did not differ between patients and controls. Addition of WKYMVm markedly increased the bactericidal activities of these cells in a dose-dependent manner. During induction chemotherapy, there were significant increases in bactericidal activity in the presence and absence of 1nM WKYMVm, with higher bactericidal activities at the time of complete remission than at the time of diagnosis or on day 15. During consolidation chemotherapy, WKYMVm had no effect on bactericidal activities. Patients showed significant increase in the concentrations of TNF alpha, IL-1b, IL-6 and IL-8, but significant decrease in the concentrations of IL-2, IL-4 and IL-12. TNF alpha, IL-1b and IL-6 showed significant negative correlations with bactericidal activities of patient neutrophils at time of diagnosis, and IL-4 showed a significant positive correlation with bactericidal activities,these findings indicate that WKYMVm enhances bactericidal activity in patients with AL[2].
Cell Research	Ligand-mediated internalization of FPRL1 and FPRL2 was followed by an indirect immunofluorescence microscopy staining technique. Cells were seeded on polyornithine-coated coverslips 48 h prior to the experiments. To stop protein synthesis, cells were incubated in RPMI 1640 medium containing 1% BSA and 100 μg/ml cycloheximide for 3 h and maintained in the same medium throughout the experiment. To study receptor internalization, RINm5F-FPRL1 cells and RINm5F-FPRL2 cells were treated with either WKYMVM or WKYMVm at 37 °C for various time periods ranging from 0 to 30 min. Cells were finally fixed and permeabilized with acetone at −20 °C for 30 s[1].
Animal Research	

Solubility Information

Solubility	DMSO: 10 mM (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.168 mL	5.84 mL	11.681 mL
5 mM	0.234 mL	1.168 mL	2.336 mL
10 mM	0.117 mL	0.584 mL	1.168 mL
50 mM	0.023 mL	0.117 mL	0.234 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Christophe T , Karlsson A , Dugave C , et al. The Synthetic Peptide Trp-Lys-Tyr-Met-Val-Met-NH2 Specifically Activates Neutrophils through FPRL1/Lipoxin A4 Receptors and Is an Agonist for the Orphan Monocyte-expressed Chemoattractant Receptor FPRL2[J]. Journal of Biological Chemistry, 2001, 276(24):21585-21593.

2. Kim H , Noh E K , Lee E J , et al. Enhanced bactericidal function by WKYMVm in patients with acute leukemia[J]. Leukemia Research, 2008, 32(5):717-725.

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