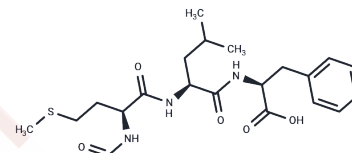


N-Formyl-Met-Leu-Phe

Chemical Properties

CAS No. :	59880-97-6
Formula:	C ₂₁ H ₃₁ N ₃ O ₅
Molecular Weight:	437.55
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	N-Formyl-Met-Leu-Phe (N-Formyl-MLF) (fMLF) is a synthetic peptide that acts as an agonist at formyl peptide receptors (FPR; $K_i = 0.8 \text{ pM}$).
Targets(IC50)	TNF
In vitro	N-Formyl-Met-Leu-Phe receptor is associated with a Ni GTP regulatory protein, and N-Formyl-Met-Leu-Phe complex is important in the control of several neutrophil functions [1].
In vivo	N-Formyl-Met-Leu-Phe(fMLP) promoted bone formation in zebrafish and rabbits, suggesting its physiological relevance in vivo[2].
Animal Research	zebrafish (<i>Danio rerio</i>) embryos were collected from spontaneous spawnings reared at 28.5 °C. Three days postfertilization (~ 1 day after hatching), feeding of the commercial powder for baby fish was started. Zebrafish embryos were stimulated with fMLP from 8 to 48 h postfertilization (hpf), washed, and raised at 28.5 °C. At 5 days postfertilization (dpf), 20 zebrafish were stained with Alizarin Red for examination of the effect of fMLP on bone formation. Zebrafish were fixed in 4% paraformaldehyde for 12-18 h. Following fixation, fish were depigmented overnight in 1% KOH containing 3% H ₂ O ₂ and immersed for 2 h in 0.5% KOH containing 0.05% Alizarin Red, pH 4.2. Alizarin-stained fish were then cleared again in 1% KOH and observed under a microscope[2].

Solubility Information

Solubility	DMSO: 120 mg/mL (274.25 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (7.54 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2855 mL	11.4273 mL	22.8545 mL
5 mM	0.4571 mL	2.2855 mL	4.5709 mL
10 mM	0.2285 mL	1.1427 mL	2.2855 mL
50 mM	0.0457 mL	0.2285 mL	0.4571 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Lad P M , Olson C V , Smiley P A . Association of the N-formyl-Met-Leu-Phe receptor in human neutrophils with a GTP-binding protein sensitive to pertussis toxin.[J]. Proceedings of the National Academy of Sciences, 1985, 82(3): 869-873.

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