

N-Formyl-Met-Leu-Phe Protein
A Potent Agonist of FPR1 G-Protein Coupled Receptor
Catalog # PG10014

Specification

N-Formyl-Met-Leu-Phe Protein - Product Information

N-Formyl-Met-Leu-Phe Protein - Additional Information

Storage
-20°C

Precautions

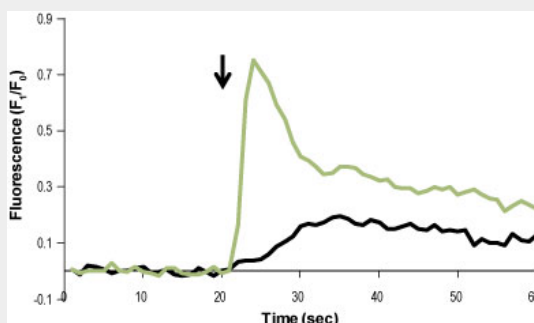
N-Formyl-Met-Leu-Phe Protein is for research use only and not for use in diagnostic or therapeutic procedures.

N-Formyl-Met-Leu-Phe Protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

N-Formyl-Met-Leu-Phe Protein - Images



N-Formyl-Met-Leu-Phe - Abgent N-Formyl-Met-Leu-Phe activates Ca²⁺ transients in differentiated HL-60 cells. Cells were loaded with Fluo-3 AM. Changes in intracellular Ca²⁺ were detected via changes in Fluo-3 emission following application (indicated by arrow) of 1 μM N-Formyl-Met-Leu-Phe (#PG10014), (green) compared to control (black, saline perfusion).

N-Formyl-Met-Leu-Phe Protein - Background

Chemotactic factors from both Gram-positive and Gram-negative bacteria are short peptides with N-formyl methionine at the N-terminus (extensively reviewed in reference 1). These peptides are released from bacteria during infection and activate formyl peptide receptor (FPR), a member of G-protein coupled receptors (GPCRs). In human, the FPR family consists mainly of three receptors, FPR1, FPR2/ALX (formerly FPRL1), and FPR3 (formerly FPRL2) which all couple to the Gi subtype of G-proteins and ultimately lead to the activation of phospholipase C and intracellular Ca^{2+} increase^{1,2}. N-Formyl-Met-Leu-Phe is a selective and potent agonist of the Formylpeptide receptor (FPR1)³. In human polymorphonuclear leukocytes N-formyl-met-leu-phe activates p38 by a process involving phosphatidylinositol 3-kinase, protein kinase C, and calcium⁴. N-Formyl-Met-Leu-Phe increased in a dose-dependent manner (0.1 nM – 1 μM) the adherence of neutrophils to vascular endothelial cells which is the initial event in the migration of neutrophils through blood vessel walls to tissue sites of inflammation⁵.

N-Formyl-Met-Leu-Phe Protein - References

1 . Ye, R.D. et al.(2009)Pharmacol. Rev.61, 119.2 . Le, Y. et al.(2002)Trends Immunol. 23, 541.3 . Showell, H.J. et al. (1976)J. Exp. Med 143,1154.4 . Krump, E. et al.(1997)J. Biol. Chem.272, 937.5 . Tonnesen, M.G. et al. (1984)J. Clin. Invest. 74,1581.