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WKYMVM Protein
A Potent Agonist of FPR2 and FPR3 G-Protein Coupled Receptors
Catalog # PG10020

Specification

WKYMVM Protein - Product Information

WKYMVM Protein - Additional Information

Storage
-20°C

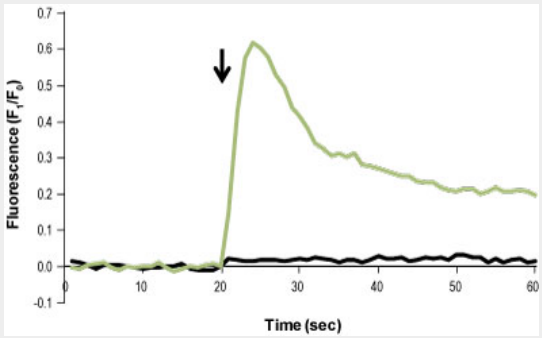
Precautions
WKYMVM Protein is for research use only and not for use in diagnostic or therapeutic procedures.

WKYMVM 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 Cytomety
- Cell Culture

WKYMVM Protein - Images



WKYMVM - Abgent WKYMVM activates Ca2+ transients in differentiated HL-60 cells.Cells (1.3% DMSO, day 6) 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 WKYMVM(#PG10020), (green) compared to control (black, saline perfusion).

WKYMVM 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 Ca2+increase1,2.WKYMVM is a selective agonist of the Formyl peptide receptors (FPR2 and FPR3) and was discovered by screening peptide libraries for their ability to stimulate inositol phosphates in lymphocyte cell lines3,4. FPR2 is expressed in the promyelocytic leukemia cell line HL-60 as well as in the chronic myelogenous leukemia cell line K5625. WKYMVM triggered the activity of NADPH oxidase and generation of superoxide anions in human neutrophils6. In mouse dendritic cells, WKYMVM triggered Ca2+ signals in a pertussis toxin dependent manner, leading to increased phagocytosis via phospholipase D activation7.

WKYMVM Protein - References

1 . Ye, R.D. et al.(2009)Pharmacol. Rev.61,119.2 . Le, Y. et al.(2002)Trends Immunol. 23,541.3 . Baek, S. H. et al.(1996)J. Biol. Chem.271,8170.4 . Christophe, T. et al. (2001)J. Biol. Chem. 276,21585.5 . See Applications for Anti-Human FPR2/ALX (extracellular).6 . Betten, A. et al. (2003)Scand. J. Immunol. 58,321.7 . Lee, H.Y. et al. (2004)Exp. Mol. Medicine 36,135.