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WRW4 Protein

A Potent Antagonist of FPR2 and FPR3 G-Protein Coupled Receptors

Catalog # PG10022

Specification

WRW4 Protein - Product Information

WRW4 Protein - Additional Information

Storage
-20°C

Precautions
WRW4 Protein is for research use only and not for use in diagnostic or therapeutic procedures.

WRW4 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

WRW4 Protein - Images

WRW4 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.WRW4 is a selective and potent antagonist of the Formylpeptide receptors (FPR2 and FPR3)3,4, which was identified by screening hexapeptide libraries that inhibit the binding of the FPR2 agonist WKYMVm to its specific receptor, in RBL-2H3 cells3. In human umbilical vein endothelial cells, WRW4 (10 mM), inhibited CCL2 production, which was stimulated by serum amyloid A5.FPR2 is expressed in the promyelocytic leukemia cell line HL-60 as well as in the chronic myelogenous leukemia cell line K5626. In human neutrophils, 10 µM WRW4 blocked the specific FPR2 agonist (MMK1) induced Ca2+ influx. In addition, at the same concentration WRW4 blocked Ca2+ influxes, generated by stimulation with the Alzheimer’s diseases Amiloide ß42 peptide, by lipoxin A4 and by fMLF3.

WRW4 Protein - References

1 . Ye, R.D. et al.(2009)Pharmacol. Rev.61,119.2 . Le, Y. et al.(2002)Trends Immunol. 23,541.3 . Bae, Y.S. et al. (2004)J. Immunol. 173,607.4 . Shin, E.H. et al. (2006)Biochem. Biophys. Res. Commun. 341,1317.5 . Lee, H.Y. et al. (2010)Exp. Mol. Med. 42,302.6 . See Applications for Anti-Human FPR2/ALX (extracellular).