SANTA CRUZ BIOTECHNOLOGY, INC.

# FPR2 siRNA (m): sc-145234

## BACKGROUND

The N-formyl peptide receptor (FPR) family is comprised of three members, FPR, FPR like-1 (FPRL1, also designated lipoxin A4 receptor, FPRH1 and FPR2) and FPR like-2 (FPRL2), all of which are chemotactic G protein-coupled receptors that contain seven transmembrane domains. These receptors are found on the surface of phagocytic leukocytes, such as neutrophils and monocytes, and each family member contains specific residues, which are responsible for determining its ligand specificity. FPRL1 is a promiscuous receptor that binds to several ligands, including lipoxin A4, N-formyl-methionyl-leucyl-phenylalanine (fMLP), serum amyloid A (SAA), prion peptide and the 42 amino acid form of β-Amyloid. Upon activation, FPRL1 induces migration and calcium mobilization in human monocytes and neutrophils and is involved in inflammatory and host defense responses. FPRL1 may mediate inflammation in prion and Alzheimer's diseases, which makes it a potential target for therapeutic agents.

## REFERENCES


1. Gerard, N.P., et al. 1993. Human chemotaxis receptor genes cluster at 19q13.3-13.4. Characterization of the human C5a receptor gene. Biochemistry 32: 1243-1250.
2. Shen, W., et al. 2000. Activation of the chemotactic peptide receptor FPRL1 in monocytes phosphorylates the chemokine receptor CCR5 and attenuates cell responses to selected chemokines. Biochem. Biophys. Res. Commun. 272: 276-283.
3. Hu, J.Y., et al. 2001. Synthetic peptide MMK-1 is a highly specific chemotactic agonist for leukocyte FPRL1. J. Leukoc. Biol. 70: 155-161.
4. Le, Y., et al. 2001. Pleiotropic roles of formyl peptide receptors. Cytokine Growth Factor Rev. 12: 91-105.
5. Christophe, T., et al. 2001. The synthetic peptide Trp-Lys-Tyr-Met-Val-Met-$NH_2$ specifically activates neutrophils through FPRL1/lipoxin A4 receptors and is an agonist for the orphan monocyte-expressed chemoattractant receptor FPRL2. J. Biol. Chem. 276: 21585-21593.
6. Le, Y., et al. 2001. The neurotoxic prion peptide fragment PrP(106-126) is a chemotactic agonist for the G protein-coupled receptor formyl peptide receptor-like 1. J. Immunol. 166: 1448-1451.
7. Yang, D., et al. 2001. Differential regulation of formyl peptide receptor-like 1 expression during the differentiation of monocytes to dendritic cells and macrophages. J. Immunol. 166: 4092-4098.
8. Le, Y., et al. 2001. Amyloid β42 activates a G protein-coupled chemoattractant receptor, FPR-like-1. J. Neurosci. 21: RC123.


## CHROMOSOMAL LOCATION

Genetic locus: Fpr2 (mouse) mapping to 17 A3.2.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

## PRODUCT

FPR2 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FPR2 shRNA Plasmid (m): sc-145234-SH and FPR2 shRNA (m) Lentiviral Particles: sc-145234-V as alternate gene silencing products.

For independent verification of FPR2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-145234A, sc-145234B and sc-145234C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

FPR2 siRNA (m) is recommended for the inhibition of FPR2 expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FPR2 gene expression knockdown using RT-PCR Primer: FPR2 (m)-PR: sc-145234-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS


1. Benabdoun, H.A., et al. 2019. *In vitro* and *in vivo* assessment of the proresolutive and antiresorptive actions of resolvin D1: relevance to arthritis. Arthritis Res. Ther. 21: 72.


## RESEARCH USE

For research use only, not for use in diagnostic procedures.