

FPR2 (F-16): sc-13193

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

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- Belisle, B., et al. 2000. N-Formyl peptide receptor ligation induces Rac-dependent actin reorganization through $G_{\beta\gamma}$ subunits and class Ia phosphoinositide 3-kinase. *J. Biol. Chem.* 275: 16225-16232.
- Mills, J.S., et al. 2000. Characterization of the binding site on the formyl peptide receptor using three receptor mutants and analogs of Met-Leu-Phe and Met-Met-Trp-Leu-Leu. *J. Biol. Chem.* 275: 39012-39017.
- Shen, W., et al. 2000. Downregulation of the chemokine receptor CCR5 by activation of chemotactic formyl peptide receptor in human monocytes. *Blood* 96: 2887-2894.
- He, R., et al. 2000. The synthetic peptide Trp-Lys-Tyr-Met-Val-D-Met is a potent chemotactic agonist for mouse formyl peptide receptor. *J. Immunol.* 165: 4598-4605.
- Walther, A., et al. 2000. A novel ligand of the formyl peptide receptor: Annexin I regulates neutrophil extravasation by interacting with the FPR. *Mol. Cell* 5: 831-840.

CHROMOSOMAL LOCATION

Genetic locus: FPR2 (human) mapping to 19q13.41.

SOURCE

FPR2 (F-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FPR2 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13193 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FPR2 (F-16) is recommended for detection of FPR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FPR2 siRNA (h): sc-40123, FPR2 shRNA Plasmid (h): sc-40123-SH and FPR2 shRNA (h) Lentiviral Particles: sc-40123-V.

Molecular Weight of FPR2: 40 kDa.

Molecular Weight of FPR2 dimer: 100 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182 or human PBL whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Rane, M.J., et al. 2005. γ -amino butyric acid type B receptors stimulate neutrophil chemotaxis during ischemia-reperfusion. *J. Immunol.* 174: 7242-7249.
- Sitrin, R.G., et al. 2006. Selective localization of recognition complexes for Leukotriene B4 and formyl-Met-Leu-Phe within lipid raft microdomains of human polymorphonuclear neutrophils. *J. Immunol.* 177: 8177-8184.
- Cattaneo, F., et al. 2011. NADPH-oxidase-dependent reactive oxygen species mediate EGFR transactivation by FPRL1 in WKYMVm-stimulated human lung cancer cells. *Free Radic. Biol. Med.* 51: 1126-1136.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.