SANTA CRUZ BIOTECHNOLOGY, INC.

PAF-R (H-300): sc-20732

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Platelet-activating factor (PAF) is a pro-inflammatory lipid mediator that activates many cell types including leukocytes, platelets and vascular endothelial cells in response to cutaneous inflammation. PAF signaling is primarily directed through binding to the G protein-coupled PAF-receptors (PAF-R) and results in signal transduction by various pathways that are regulated by phospholipase C, phospholipase A2 and mitogen-activated protein kinases. Activation of PAF-R is associated with alterations in cell morphology, cytoskeletal remodeling and expression of inflammatory modulators, including cyclo-oxygenase-2, interleukin (IL)-6 and IL-8. PAF-R is detected at 69 kDa, and its expression is upregulated by PAF and gut flora in intestinal epithelium. PAF-R transcription is downregulated by glucocorticoids as a result of eosinophil depletion, suggesting that PAF-R may play a role in both host defenses and inflammatory responses.

REFERENCES

1. Nakamura, M., et al. 1991. Molecular cloning and expression of platelet-activating factor receptor from human leukocytes. J. Biol. Chem. 266: 20400-20405.
2. Kunz, D., et al. 1992. The human leukocyte platelet-activating factor receptor. cDNA cloning, cell surface expression, and construction of a novel epitope-bearing analog. J. Biol. Chem. 267: 9101-9106.
3. Muller, E., et. al. 1993. Identification and functional characterization of platelet-activating factor receptors in human leukocyte populations using polyclonal anti-peptide antibody. Proc. Natl. Acad. Sci. USA 90:5818-5822.
4. Predescu, D., et al. 1996. The vascular distribution of the platelet-activating factor receptor. Eur. J. Cell Biol. 69: 86-98.
5. Ahmed, A., et al. 1998. Localization, quantification, and activation of platelet-activating factor receptor in human endometrium during the menstrual cycle: PAF stimulates NO, VEGF, and FAKpp125. FASEB J. 12: 831-843.
6. Kotelevets, L., et al. 1998. Inhibition by platelet-activating factor of Src- and hepatocyte growth factor-dependent invasiveness of intestinal and kidney epithelial cells. Phosphatidylinositol 3′-kinase is a critical mediator of tumor invasion. J. Biol. Chem. 273: 14138-14145.
7. Barber, L.A., et al. 1998. Expression of the platelet-activating factor receptor results in enhanced ultraviolet B radiation-induced apoptosis in a human epidermal cell line. J. Biol. Chem. 273: 18891-18897.
8. Merendino, N., et al. 1999. Human intestinal epithelial cells express receptors for platelet-activating factor. Am. J. Physiol. 277: G810-G818.
9. Wang, H., et al. 1999. Platelet-activating factor receptor mRNA is localized in eosinophils and epithelial cells in rat small intestine: regulation by dexamethasone and gut flora. Immunology 97: 447-454.

CHROMOSOMAL LOCATION

Genetic locus: PTAFR (human) mapping to 1p35.3; Ptafr (mouse) mapping to 4 D2.2.

RESEARCH USE

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

SOURCE

PAF-R (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of PAF-R of human origin.

PRODUCT

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

APPLICATIONS

PAF-R (H-300) is recommended for detection of PAF-R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 PAF-R siRNA (h): sc-40165, PAF-R siRNA (m): sc-40166, PAF-R shRNA Plasmid (h): sc-40165-SH, PAF-R shRNA Plasmid (m): sc-40166-SH, PAF-R shRNA (h) Lentiviral Particles: sc-40165-V and PAF-R shRNA (m) Lentiviral Particles: sc-40166-V.

Molecular Weight of PAF-R: 39/69 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Reyes, Y.A., et al. 2006. MCI-186 (edaravone), a free radical scavenger, attenuates ischemia-reperfusion injury and activation of phospholipase A_2 in an isolated rat lung model after 18 h of cold preservation. Eur. J. Cardiothorac. Surg. 29: 304-311.
2. Bellido-Reyes, Y.A., et al. 2006. Cytosolic phospholipase A2 inhibition attenuates ischemia-reperfusion injury in an isolated rat lung model. Transplantation 81: 1700-1707.
3. McLaughlin, N.J., et al. 2006. Platelet-activating factor-induced clathrin-mediated endocytosis requires β-Arrestin-1 recruitment and activation of the p38 MAPK signalosome at the plasma membrane for Actin bundle formation. J. Immunol. 176: 7039-7050.

STORAGE

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