

PAF-R (M-16): sc-8744

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, cyto-skeletal remodeling and expression of inflammatory modulators, including cyclo-oxygenase-2, interleukin (IL)-6 and IL-8. Expression of PAF-R 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

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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. Predescu, D., et al. 1996. The vascular distribution of the platelet-activating factor receptor. *Eur. J. Cell Biol.* 69: 86-98.
4. 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.
5. 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.
6. 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.
7. 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.
8. Tiemann, U., et al. 2001. Platelet-activating factor (PAF)-like activity, localization of PAF receptor (PAF-R) and PAF-acetylhydrolase (PAF-AH) activity in bovine endometrium at different stages of the estrous cycle and early pregnancy. *Prostaglandins Other Lipid Mediat.* 65: 125-141.

CHROMOSOMAL LOCATION

Genetic locus: *Ptfr* (mouse) mapping to 4 D2.3.

SOURCE

PAF-R (M-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PAF-R of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-8744 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PAF-R (M-16) is recommended for detection of PAF-R of mouse and, to a lesser extent, rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (m): sc-40166, PAF-R shRNA Plasmid (m): sc-40166-SH and PAF-R shRNA (m) Lentiviral Particles: sc-40166-V.

Molecular Weight of PAF-R: 45/67/116 kDa.

SELECT PRODUCT CITATIONS

1. Yang, Y., et al. 2004. Increased hepatic platelet activating factor (PAF) and PAF receptors in carbon tetrachloride induced liver cirrhosis. *Gut* 53: 877-883.
2. Radin, J.N., et al. 2005. β-Arrestin 1 participates in platelet-activating factor receptor-mediated endocytosis of *Streptococcus pneumoniae*. *Infect. Immun.* 73: 7827-7835.
3. Wang, G.D., et al. 2006. Platelet-activating factor in the enteric nervous system of the guinea pig small intestine. *Am. J. Physiol. Gastrointest. Liver Physiol.* 291: 928-937.
4. Fillon, S., et al. 2006. Platelet-activating factor receptor and innate immunity: uptake of gram-positive bacterial cell wall into host cells and cell-specific pathophysiology. *J. Immunol.* 177: 6182-6191.
5. Hinojosa, E., et al. 2009. Age-associated inflammation and toll-like receptor dysfunction prime the lungs for pneumococcal pneumonia. *J. Infect. Dis.* 200: 546-554.
6. Fragel-Madeira, L., et al. 2011. Platelet activating factor blocks interkinetic nuclear migration in retinal progenitors through an arrest of the cell cycle at the S/G₂ transition. *PLoS ONE* 6: e16058.

STORAGE

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

RESEARCH USE

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