SANTA CRUZ BIOTECHNOLOGY, INC.

PAF acetylhydrolase (H-130): sc-33137

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Platelet Activating Factor (PAF) Acetylhydrolases catalyze hydrolysis of the sn-2 ester bond of PAF and related pro-inflammatory phospholipids and thus attenuate their bioactivity. The family of PAF Acetylhydrolases include one secreted plasma isozyme and four intracellular proteins. The intra-cellular isozymes are distinguished by differences in their primary sequence, tissue localization, subunit composition, and substrate preferences. The most thoroughly characterized intracellular isoform, Ib, contains two homologous (63% identity) 26 kDa catalytic subunits (α1 and α2), which harbor all the enzyme's activity, and a regulatory β subunit. The α subunits readily associate with very high affinity to form homodimers, and this dimerization is essential for both stability and catalytic activity. The β subunit is a product of the LIS1 gene, mutations of which cause Miller-Dieker lissencephaly.

REFERENCES

1. Tjoelker, L.W. and Stafforini, D.M. 2000. Platelet-activating factor acetylhydrolases in health and disease. Biochim. Biophys. Acta 1488: 102-123.
2. McMullen, T.W., Li, J., Sheffield, P.J., Aoki, J., Martin, T.W., Arai, H., Inoue, K. and Derewenda, Z.S. 2000. The functional implications of the dimerization of the catalytic subunits of the mammalian brain platelet-activating factor acetylhydrolase (Ib). Protein Eng. 13: 865-871.
3. Kuijpers, T.W., van den Berg, J.M., Tool, A.T. and Roos, D. 2001. The impact of platelet-activating factor (PAF)-like mediators on the functional activity of neutrophils: anti-inflammatory effects of human PAF-acetylhydrolase. Clin. Exp. Immunol. 123: 412-420.
4. Goudevenos, J., Tselepis, A.D., Vini, M.P., Michalis, L., Tsoukatos, D.C., Elisaf, M., Ninio, E. and Sideris, D.A. 2001. Platelet-associated and secreted PAF-acetylhydrolase activity in patients with stable angina: sequential changes of the enzyme activity after angioplasty. Eur. J. Clin. Invest. 31: 15-23.
5. Quarck, R., De Geest, B., Stengel, D., Mertens, A., Lox, M., Theilmeier, G., Michiels, C., Raes, M., Bult, H., Collen, D., Van Veldhoven, P., Ninio, E. and Holvoet, P. 2001. Adenovirus-mediated gene transfer of human platelet-activating factor acetylhydrolase prevents injury-induced neointima formation and reduces spontaneous atherosclerosis in apolipoprotein E-deficient mice. Circulation 103: 2495-2500.

CHROMOSOMAL LOCATION

Genetic locus: PLA2G7 (human) mapping to 6p12; Pla2g7 (mouse) mapping to 17 C.

SOURCE

PAF acetylhydrolase (H-130) is a rabbit polyclonal antibody raised against amino acids 22-151 mapping near the N-terminus of PAF acetylhydrolase 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 acetylhydrolase (H-130) is recommended for detection of PAF acetylhydrolase of human and, to a lesser extent, mouse and rat 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 Acetylhydrolase siRNA (h): sc-39691.

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.

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.

PROTOCOLS

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