SANTA CRUZ BIOTECHNOLOGY, INC.

PYPAF7 (A-3): sc-390666

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pyrin-containing Apaf1-like proteins (PYPAFs) are members of the nucleotide-binding site/leucine-rich repeat (NBS/LRR) family of signal transduction proteins that function in apoptotic and inflammatory signaling pathways. PYPAF7, also known as Monarch-1, regulates activation of caspase-1 via ASC protein and promotes activation of NFκB via IKK. PYPAF7 enhances nonclassical and classical MHC class I expression at the level of the promoter, RNA, and protein expression. PYPAF7 is present in the cytoplasm of peripheral blood leukocytes, predominantly eosinophils and granulocytes, with lower levels in monocytes. The PYPAF7 gene maps to human chromosome 19q13.42.

REFERENCES

1. Wang, L., et al. 2002. PYPAF7, a novel PYRIN-containing Apaf1-like protein that regulates activation of NFκB and caspase-1-dependent cytokine processing. J. Biol. Chem. 277: 29874-29880.
2. Grenier, J.M., et al. 2002. Functional screening of five PYPAF family members identifies PYPAF5 as a novel regulator of NFκB and caspase-1. FEBS Lett. 530: 73-78.
3. Williams, K., et al. 2003. Cutting edge: Monarch-1: a pyrin/nucleotide-binding domain/leucine-rich repeat protein that controls classical and nonclassical MHC class I genes. J. Immunol. 170: 5354-5358.
4. Hasegawa, M., et al. 2005. ASC-mediated NFκB activation leading to IL-8 production requires caspase-8 and is inhibited by CLARP. J. Biol. Chem. 280: 15122-15130.

CHROMOSOMAL LOCATION

Genetic locus: NLRP12 (human) mapping to 19q13.42; Nlrp12 (mouse) mapping to 7 A1.

SOURCE

PYPAF7 (A-3) is a mouse monoclonal antibody raised against amino acids 853-892 mapping near the C-terminus of PYPAF7 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PYPAF7 (A-3) is available conjugated to agarose (sc-390666 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390666 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390666 PE), fluorescein (sc-390666 FITC), Alexa Fluor® 488 (sc-390666 AF488), Alexa Fluor® 546 (sc-390666 AF546), Alexa Fluor® 594 (sc-390666 AF594) or Alexa Fluor® 647 (sc-390666 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390666 AF680) or Alexa Fluor® 790 (sc-390666 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

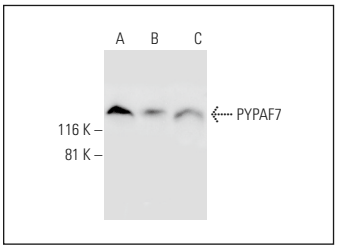
PYPAF7 (A-3) is recommended for detection of PYPAF7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 PYPAF7 siRNA (h): sc-45388, PYPAF7 siRNA (m): sc-45389, PYPAF7 shRNA Plasmid (h): sc-45388-SH, PYPAF7 shRNA Plasmid (m): sc-45389-SH, PYPAF7 shRNA (h) Lentiviral Particles: sc-45388-V and PYPAF7 shRNA (m) Lentiviral Particles: sc-45389-V.

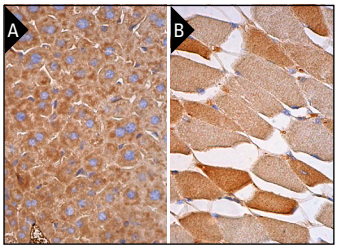
Molecular Weight of PYPAF7: 120 kDa.

Positive Controls: F9 cell lysate: sc-2245, HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

DATA



PYPAF7 (A-3): sc-390666. Western blot analysis of PYPAF7 expression in F9 (**A**), HL-60 (**B**) and Jurkat (**C**) whole cell lysates.



PYPAF7 (A-3): sc-390666. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing cytoplasmic staining of hepatocytes (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (**B**).

SELECT PRODUCT CITATIONS

1. Singh, D.P., et al. 2018. Membrane microdomains regulate NLRP10- and NLRP12-dependent signalling in A549 cells challenged with cigarette smoke extract. Arch. Toxicol. 92: 1767-1783.
2. Bi, X., et al. 2025. ZBP1-mediated PANoptosis is a crucial lethal form in diverse keratinocyte death modalities in UVB-induced skin injury. Cell Death Dis. 16: 44.

RESEARCH USE

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

PROTOCOLS

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