SANTA CRUZ BIOTECHNOLOGY, INC.

PFAAP5 (F-2): sc-514596

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PFAAP5 (phosphonoformate immuno-associated protein 5), also known as NEDD4-binding protein 2-like 2, is a 583 amino acid nuclear protein that potentially is involved in transcriptional regulation. PFAAP5 is phosphorylated on Ser 199 in response to DNA damage, probably by ATM or ATR. Primarily expressed in bone marrow, PFAAP5 is dramatically down-regulated after exposure to arsenic compounds, an event which precedes neutropenia. PFAAP5 interacts with both Gfi-1 and Neutrophil Elastase, two proteins that are implicated in neutropenia disorders. Defects in the gene encoding Neutrophil Elastase, ELA2, are the cause of cyclic haematopoiesis, which, with decreased numbers of circulating neutrophils, leads to an increased risk for opportunistic infection. Gfi1 is a transcriptional repressor that targets the ELA2 gene among others. With PFAAP5 expression, Neutrophil Elastase can potentiate repression of Gfi1 target genes, leading to the transcription of ELA2 and subsequent neutrophil differentiation. There are two isoforms of PFAAP5 that are produced as a result of alternative splicing events.

REFERENCES

1. Couch, F.J., et al. 1996. Generation of an integrated transcription map of the BRCA2 region on chromosome 13q12-q13. Genomics 36: 86-99.
2. Grimes, H.L., et al. 1996. The Gfi-1 protooncoprotein represses Bax expression and inhibits T-cell death. Proc. Natl. Acad. Sci. USA 93: 14569-14573.
3. Doan, L.L., et al. 2004. Targeted transcriptional repression of Gfi1 by GFI1 and GFI1B in lymphoid cells. Nucleic Acids Res. 32: 2508-2519.
4. Argos, M., et al. 2006. Gene expression profiles in peripheral lymphocytes by arsenic exposure and skin lesion status in a Bangladeshi population. Cancer Epidemiol. Biomarkers Prev. 15: 1367-1375.
5. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. Science 316: 1160-1166.

CHROMOSOMAL LOCATION

Genetic locus: N4BP2L2 (human) mapping to 13q13.1; N4bp2l2 (mouse) mapping to 5 G3.

SOURCE

PFAAP5 (F-2) is a mouse monoclonal antibody raised against amino acids 489-550 mapping near the C-terminus of PFAAP5 of human 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.

PFAAP5 (F-2) is available conjugated to agarose (sc-514596 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514596 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514596 PE), fluorescein (sc-514596 FITC), Alexa Fluor® 488 (sc-514596 AF488), Alexa Fluor® 546 (sc-514596 AF546), Alexa Fluor® 594 (sc-514596 AF594) or Alexa Fluor® 647 (sc-514596 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514596 AF680) or Alexa Fluor® 790 (sc-514596 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PFAAP5 (F-2) is recommended for detection of PFAAP5 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PFAAP5 siRNA (h): sc-76110, PFAAP5 siRNA (m): sc-152178, PFAAP5 shRNA Plasmid (h): sc-76110-SH, PFAAP5 shRNA Plasmid (m): sc-152178-SH, PFAAP5 shRNA (h) Lentiviral Particles: sc-76110-V and PFAAP5 shRNA (m) Lentiviral Particles: sc-152178-V.

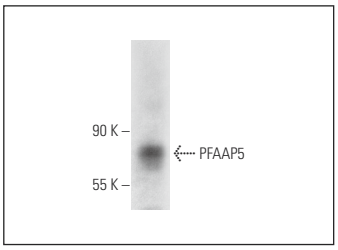
Molecular Weight of PFAAP5: 67 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or THP-1 cell lysate: sc-2238.

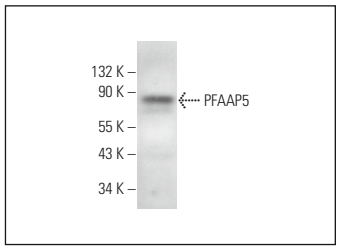
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PFAAP5 (F-2): sc-514596. Western blot analysis of PFAAP5 expression in HL-60 whole cell lysate.



PFAAP5 (F-2): sc-514596. Western blot analysis of PFAAP5 expression in THP-1 whole cell lysate.

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 for detailed protocols and support products.