SANTA CRUZ BIOTECHNOLOGY, INC.

PIAS 1 (C-20): sc-8152

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The IL-6-type family of cytokines, which includes IL-6 as well as a number of similar cytokines and growth factors, plays a significant role in regulating gene activation, proliferation and differentiation. Transcription factors of the Stat family are known to be involved in this signal transduction pathway, undergoing phosphorylation, dimerization and translocation to the nucleus upon activation. PIAS 1, for protein inhibitor of activated Stat1 (also designated Gu/RNA helicase II binding protein), binds specifically to Stat1, blocking Stat1 DNA-binding activity and inhibiting Stat1-mediated gene activation. PIAS 1 also binds to the Gu/RNA helicase II enzyme, leading to the proteolytic cleavage of Gu/RH-II. PIAS 3 similarly binds specifically to Stat3, blocking Stat3 DNA-binding activity and inhibiting Stat3-mediated gene activation.

CHROMOSOMAL LOCATION

Genetic locus: PIAS1 (human) mapping to 15q23; Pias1 (mouse) mapping to 9 B.

SOURCE

PIAS 1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PIAS 1 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.

Blocking peptide available for competition studies, sc-8152 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIAS 1 (C-20) is recommended for detection of PIAS 1 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).

PIAS 1 (C-20) is also recommended for detection of PIAS 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PIAS 1 siRNA (h): sc-36219, PIAS 1 siRNA (m): sc-36220, PIAS 1 shRNA Plasmid (h): sc-36219-SH, PIAS 1 shRNA Plasmid (m): sc-36220-SH, PIAS 1 shRNA (h) Lentiviral Particles: sc-36219-V and PIAS 1 shRNA (m) Lentiviral Particles: sc-36220-V.

Molecular Weight of PIAS 1: 78 kDa.

Positive Controls: PIAS 1 (m): 293T Lysate: sc-122561 or Daudi cell lysate: sc-2415.

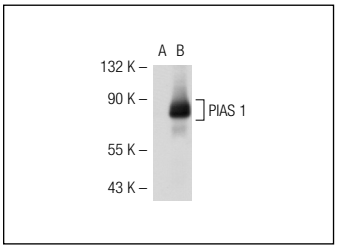
STORAGE

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

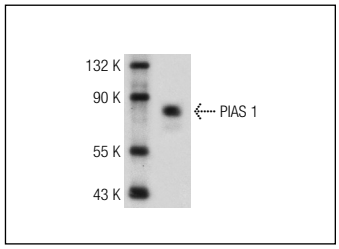
RESEARCH USE

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

DATA



PIAS 1 (C-20): sc-8152. Western blot analysis of PIAS 1 expression in non-transfected: sc-117752 (**A**) and mouse PIAS 1 transfected: sc-122561 (**B**) 293T whole cell lysates.



PIAS 1 (C-20): sc-8152. Western blot analysis of PIAS 1 expression in Daudi whole cell lysate.

SELECT PRODUCT CITATIONS

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3. Schimmel, J., et al. 2008. The ubiquitin-proteasome system is a key component of the SUMO-2/3 cycle. Mol. Cell. Proteomics 7: 2107-2122.
4. Franko, A. 2008. CREB-1α is recruited to and mediates upregulation of the cytochrome c promoter during enhanced mitochondrial biogenesis accompanying skeletal muscle differentiation. Mol. Cell. Biol. 28: 2446-2459.
5. Karvonen, U., et al. 2008. ZNF451 is a novel PML body- and SUMO-associated transcriptional coregulator. J. Mol. Biol. 382: 585-600.
6. Weber, S., et al. 2009. PRMT1-mediated arginine methylation of PIAS1 regulates STAT1 signaling. Genes Dev. 23: 118-132.
7. Staršíchová, A., et al. 2010. TGF-β1 suppresses IL-6-induced STAT3 activation through regulation of Jak2 expression in prostate epithelial cells. Cell. Signal. 22: 1734-1744.
8. Alm-Kristiansen, A.H., et al. 2011. PIAS1 interacts with FLASH and enhances its co-activation of c-Myb. Mol. Cancer 10: 21.
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