

PIASx (m): 293 Lysate: sc-111287

BACKGROUND

The IL-6-type family of cytokines, which includes IL-6 and a number of similar cytokines and growth factors, plays a significant role in regulating gene activation, proliferation and differentiation. Transcription factors of the Stat (signal transducer and activator of transcription) family are involved in IL-6 family-mediated signal transduction pathways and, upon activation, undergo phosphorylation, dimerization, and translocation to the nucleus. The duration and intensity of a cell's response to cytokines can be adjusted by the effect of several regulatory mechanisms. One example involves the protein inhibitor of activated Stat family (PIAS family) of proteins, which act as negative regulators of STATs in cytokine signaling. PIAS proteins are able to coactivate steroid receptor-dependent transcription as well. PIASx transcript is alternatively spliced to yield two protein isoforms, PIASx- α and PIASx- β , which differ in their C-terminal regions. Similar to other members of the PIAS family, the predicted PIASx proteins contain a putative zinc-binding motif and a highly acidic region.

REFERENCES

1. Akira, S., Nishio, Y., Inoue, M., Wang, X.J., Wei, S., Matusaka, T., Yoshida, K., Sudo, T., Naruto, M. and Kishimoto, T. 1994. Molecular cloning of APRF, a novel IFN-stimulated gene factor 3 p91-related transcription factor involved in the gp130-mediated signaling pathway. *Cell* 77: 63-71.
2. Zhong, Z., Wen, Z. and Darnell, J.E., Jr. 1994. Stat3: a STAT family member activated by tyrosine phosphorylation in response to epidermal growth factor and interleukin-6. *Science* 264: 95-98.
3. Heinrich, P.C., Behrmann, I., Muller-Newen, G., Schaper, F. and Graeve, L. 1998. Interleukin-6-type cytokine signalling through the gp130/JAK/Stat pathway. *Biochem. J.* 334: 297-314.
4. Liu, B., Liao, J., Rao, X., Kushner, S.A., Chung, C.D., Chang, D.D. and Shuai, K. 1998. Inhibition of Stat1-mediated gene activation by PIAS 1. *Proc. Natl. Acad. Sci. USA* 95: 10626-10631.
5. Starr, R. and Hilton, D.J. 1999. Negative regulation of the JAK/Stat pathway. *Bioessays* 21: 47-52.
6. Kotaja, N., Aittomaki, S., Silvennoinen, O., Palvimo, J.J. and Janne, O.A. 2000. ARIP3 (androgen receptor-interacting protein 3) and other PIAS (protein inhibitor of activated Stat) proteins differ in their ability to modulate steroid receptor-dependent transcriptional activation. *Mol. Endocrinol.* 14: 1986-2000.
7. Liu, B. and Shuai, K. 2001. Induction of apoptosis by protein inhibitor of activated Stat1 through c-Jun NH₂-terminal kinase activation. *J. Biol. Chem.* 276: 36624-36631.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: *Pias2* (mouse) mapping to 18 E3.

PRODUCT

PIASx (m): 293 Lysate represents a lysate of mouse PIASx transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

PIASx (m): 293 Lysate is suitable as a Western Blotting positive control for mouse reactive PIASx antibodies. Recommended use: 10-20 μ l per lane.

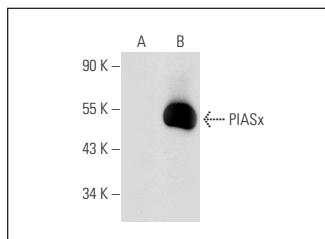
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

PIASx (D-12): sc-166494 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse PIASx expression in PIASx transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



PIASx (D-12): sc-166494. Western blot analysis of PIASx expression in non-transfected: sc-110760 (A) and mouse PIASx transfected: sc-111287 (B) 293 whole cell lysates.

RESEARCH USE

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