

Stat6 (h): 293T Lysate: sc-117401

BACKGROUND

Membrane receptor signaling by various ligands, including interferons and growth hormones such as EGF, induces activation of JAK kinases which then leads to tyrosine phosphorylation of proteins that have been designated Stats (signal transducers and activators of transcription). The first members of this family to be described include Stat1 α p91, Stat1 β p84 (a form of p91 that lacks 38 COOH-terminal amino acids) and Stat2 p113. Stat1 and Stat2 are induced by IFN- α and form a heterodimer which is part of the ISGF-3 transcription factor complex. Stat3, which becomes activated in response to epidermal growth factor (EGF) and interleukin-6 (IL-6), but not interferon- γ (IFN- γ) or Stat4, is an additional member of this family. It has been suggested that the phosphorylated forms of both Stat3 and Stat4 form homodimers as well as heterodimers with the other members of the Stat family, and that differential activation of different Stat proteins in response to different ligands should help to explain specificity in nuclear signaling from the cell surface. Highest expression of Stat4 is seen in testis and myeloid cells. IL-12 has been identified as an activator of Stat4. Other members of the Stat family include Stat5, which has been shown to be activated by Prolactin and by IL-3, and Stat6 (also designated IL-4 Stat), which is involved in IL-4-activated signaling pathways.

REFERENCES

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2. Darnell, J.E., et al. 1994. JAK-Stat pathways and transcriptional activation in response to IFNs and other extracellular signaling proteins. *Science* 264: 1415-1421.
3. Hou, J., et al. 1994. An interleukin-4-induced transcription factor: IL-4 Stat. *Science* 265: 1701-1706.
4. Yamamoto, K., et al. 1994. Stat4, a novel γ -interferon activation site-binding protein expressed in early myeloid differentiation. *Mol. Cell. Biol.* 14: 4342-4349.
5. Pallard, C., et al. 1995. Interleukin-3, erythropoietin, and Prolactin activate a Stat5-like factor in lymphoid cells. *J. Biol. Chem.* 270: 15942-15945.
6. Qureshi, S.A., et al. 1995. Tyrosine-phosphorylated Stat1 and Stat2 plus a 48 kDa protein all contact DNA in forming interferon-stimulated gene factor 3. *Proc. Natl. Acad. Sci. USA* 92: 3829-3833.

CHROMOSOMAL LOCATION

Genetic locus: STAT6 (human) mapping to 12q13.3.

PRODUCT

Stat6 (h): 293T Lysate represents a lysate of human Stat6 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

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.

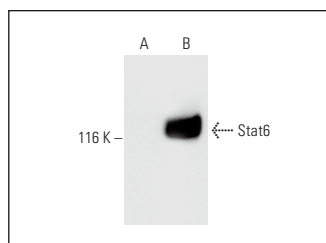
APPLICATIONS

Stat6 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Stat6 antibodies. Recommended use: 10-20 μ l per lane.

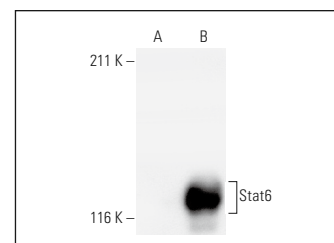
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Stat6 (AS6-45.13.9): sc-53611 is recommended as a positive control antibody for Western Blot analysis of enhanced human Stat6 expression in Stat6 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



Stat6 (AS6-45.13.9): sc-53611. Western blot analysis of Stat6 expression in non-transfected: sc-117752 (A) and human Stat6 transfected: sc-117401 (B) 293T whole cell lysates.



Stat6 (8C12): sc-81539. Western blot analysis of Stat6 expression in non-transfected: sc-117752 (A) and human Stat6 transfected: sc-117401 (B) 293T whole cell lysates.

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.