

Stat6 (AS6-10.1.1): sc-53610

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 ISGF3 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

- Zhong, Z., et al. 1994. Stat3: a Stat family member activated by tyrosine phosphorylation in response to epidermal growth factor and interleukin-6. *Science* 264: 95-98.
- 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.
- Hou, J., et al. 1994. An interleukin-4-induced transcription factor: IL-4 Stat. *Science* 265: 1701-1706.
- 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.
- Pallard, C., et al. 1995. Interleukin-3, erythropoietin, and prolactin activate a Stat5-like factor in lymphoid cells. *J. Biol. Chem.* 270: 15942-15945.

CHROMOSOMAL LOCATION

Genetic locus: STAT6 (human) mapping to 12q13.3; Stat6 (mouse) mapping to 10 D3.

SOURCE

Stat6 (AS6-10.1.1) is an Armenian hamster monoclonal antibody raised against Stat6 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

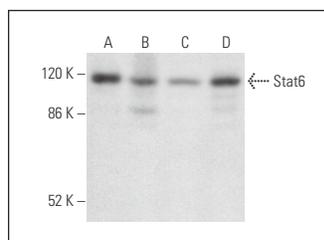
Stat6 (AS6-10.1.1) is recommended for detection of Stat6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Stat6 siRNA (h): sc-29497, Stat6 siRNA (m): sc-36570, Stat6 shRNA Plasmid (h): sc-29497-SH, Stat6 shRNA Plasmid (m): sc-36570-SH, Stat6 shRNA (h) Lentiviral Particles: sc-29497-V and Stat6 shRNA (m) Lentiviral Particles: sc-36570-V.

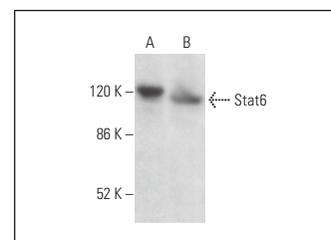
Molecular Weight of Stat6: 119 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

DATA



Stat6 (AS6-10.1.1): sc-53610. Western blot analysis of Stat6 expression in HeLa (A), BJAB (B), Hep G2 (C) and A-431 (D) whole cell lysates.



Stat6 (AS6-10.1.1): sc-53610. Western blot analysis of Stat6 expression in BJAB (A) and Daudi (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Ye, S., et al. 2012. The E3 ubiquitin ligase neuregulin receptor degradation protein 1 (Nrpd1) promotes M2 macrophage polarization by ubiquitinating and activating transcription factor CCAAT/enhancer-binding protein β (C/EBP β). *J. Biol. Chem.* 287: 26740-26748.

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.



See **Stat6 (D-1): sc-374021** for Stat6 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.