

Stat6 (C-9): sc-1689

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.

CHROMOSOMAL LOCATION

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

SOURCE

Stat6 (C-9) is a mouse monoclonal antibody raised against amino acids 280-480 of Stat6 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1689 X, 200 μ g/0.1 ml.

Stat6 (C-9) is available conjugated to agarose (sc-1689 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-1689 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-1689 PE), fluorescein (sc-1689 FITC), Alexa Fluor[®] 488 (sc-1689 AF488), Alexa Fluor[®] 546 (sc-1689 AF546), Alexa Fluor[®] 594 (sc-1689 AF594) or Alexa Fluor[®] 647 (sc-1689 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-1689 AF680) or Alexa Fluor[®] 790 (sc-1689 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

PROTOCOLS

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

APPLICATIONS

Stat6 (C-9) 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), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

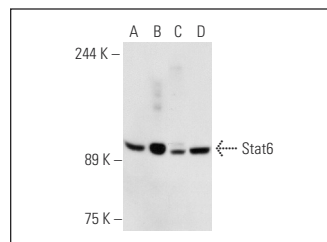
Suitable for use as control antibody for Stat6 siRNA (h): sc-29497, Stat6 siRNA (m): sc-36570, Stat6 shRNA Plasmid (h): sc-29497-SH, Stat6 shRNA Plasmid (m): sc-36570-SH, Stat6 shRNA (h) Lentiviral Particles: sc-29497-V and Stat6 shRNA (m) Lentiviral Particles: sc-36570-V.

Stat6 (C-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

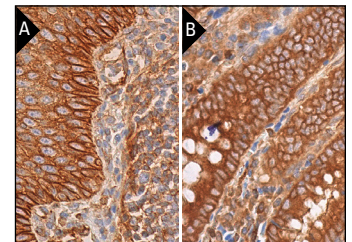
Molecular Weight of Stat6: 119 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, KNRK whole cell lysate: sc-2214 or BJAB whole cell lysate: sc-2207.

DATA



Stat6 (C-9): sc-1689. Western blot analysis of Stat6 expression in KNRK (A), NIH/3T3 (B), Jurkat (C) and BJAB (D) whole cell lysates.



Stat6 (C-9): sc-1689. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of cells in germinal center, cells in non-germinal center and squamous epithelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and lymphoid cells (B).

SELECT PRODUCT CITATIONS

- Majka, M., et al. 2000. Stromal-derived factor 1 and thrombopoietin regulate distinct aspects of human megakaryopoiesis. *Blood* 96: 4142-4151.
- Carlson, T.J., et al. 2014. Halofuginone-induced amino acid starvation regulates Stat3-dependent Th17 effector function and reduces established autoimmune inflammation. *J. Immunol.* 192: 2167-2176.
- Zheng, C., et al. 2015. CD11b regulates obesity-induced Insulin resistance via limiting alternative activation and proliferation of adipose tissue macrophages. *Proc. Natl. Acad. Sci. USA* 112: E7239-E7248.
- Sun, L., et al. 2017. The FOXM1 inhibitor RCM-1 suppresses goblet cell metaplasia and prevents IL-13 and Stat6 signaling in allergen-exposed mice. *Sci. Signal.* 10: eaai8583.

RESEARCH USE

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