

Stat5 (C-17)-G: sc-835-G

BACKGROUND

Signal transducer and activator of transcription 5a (Stat5a) and Stat5b, which share 96% homology, undergo receptor tyrosine kinase or G protein-coupled receptor-dependent phosphorylation in response to cytokines or growth factors, and then form homo- or heterodimers that translocate to the nucleus, where they initiate transcription. Activation of Stat5a via IL-2, IL-3, IL-7 GM-CSF, erythropoietin, thrombopoietin and growth hormones influences proliferation, differentiation and apoptosis in lymphohematopoietic cells. Phosphorylation of Stat5a at Ser 127/Ser 128 and Ser 779 are contingent on ErbB4-mediated activation of Stat5a. Activation of Stat5b via IL-2, IL-4, CSF1 and growth hormones influences TCR signaling, apoptosis, adult mammary gland development and sexual dimorphism of liver gene expression. Stat5b is the major liver-expressed Stat5 form that has been shown to fuse with the retinoic acid receptor a gene in acute promyelocytic leukemias (APLL). Stat5a/B null mice have severely impaired lymphoid development and differentiation.

CHROMOSOMAL LOCATION

Genetic locus: STAT5A/STAT5B (human) mapping to 17q21.2; Stat5a/Stat5b (mouse) mapping to 11 D.

SOURCE

Stat5 (C-17)-G is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Stat5 of mouse origin.

PRODUCT

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

Stat5 (C-17) is available conjugated to agarose (sc-835 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-835 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Stat5 (C-17)-G is recommended for detection of Stat5a and Stat5b 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), indirect flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Stat5 (C-17)-G is also recommended for detection of Stat5a and Stat5b in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Stat5 siRNA (h): sc-29495, Stat5 siRNA (m): sc-29496, Stat5 shRNA Plasmid (h): sc-29495-SH, Stat5 shRNA Plasmid (m): sc-29496-SH, Stat5 shRNA (h) Lentiviral Particles: sc-29495-V and Stat5 shRNA (m) Lentiviral Particles: sc-29496-V.

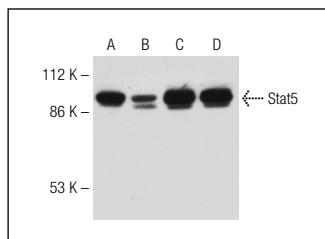
Stat5 (C-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Stat5: 92 kDa.

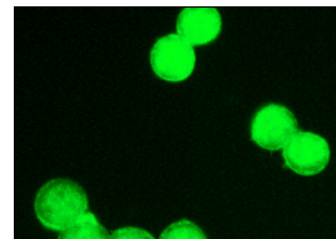
STORAGE

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

DATA



Stat5 (C-17): sc-835. Western blot analysis of Stat5 expression in Y79 (A), A-673 (B), K-562 (C) and Jurkat (D) nuclear extracts.



Stat5 (C-17): sc-835. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear staining.

SELECT PRODUCT CITATIONS

- Jaster, R., et al. 1997. JAK2 is required for induction of the murine DUB1 gene. *Mol. Cell. Biol.* 17: 3364-3372.
- Too, C.K. 1997. Induction of Sp1 activity by prolactin and interleukin-2 in Nb2 T-cells: differential association of Sp1-DNA complexes with Stats. *Mol. Cell. Endocrinol.* 129: 7-16.
- Mazumder, E.D., et al. 2012. A molecular model for the differential activation of STAT3 and STAT6 by the herpesviral oncoprotein tip. *PLoS ONE* 7: e34306.
- Lee, J.E., et al. 2012. Nongenomic STAT5-dependent effects on Golgi apparatus and endoplasmic reticulum structure and function. *Am. J. Physiol., Cell Physiol.* 302: C804-C820.
- Yang, X., et al. 2012. Angiogenesis induced by signal transducer and activator of transcription 5A (STAT5A) is dependent on autocrine activity of proliferin. *J. Biol. Chem.* 287: 6490-6502.
- Davoodi-Semiromi, A., et al. 2012. The tyrphostin agent AG490 prevents and reverses type 1 diabetes in NOD mice. *PLoS ONE* 7: e36079.
- Hesling, C., et al. 2013. Tif1γ is essential for the terminal differentiation of mammary alveolar epithelial cells and for lactation through SMAD4 inhibition. *Development* 140: 167-175.
- Khan, R., et al. 2013. Live-cell imaging of the association of STAT6-GFP with mitochondria. *PLoS ONE* 8: e55426.

RESEARCH USE

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



Try **Stat5b (G-2): sc-1656** or **Stat5 (A-9): sc-74442**, our highly recommended monoclonal alternatives to Stat5 (C-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Stat5b (G-2): sc-1656**.