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 Ser127/Ser128 and Ser779 are contigent 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 (APL1). 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 11D.

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-835P, (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 10^6 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.


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

Molecular Weight of Stat5: 92 kDa.

SELECT PRODUCT CITATIONS


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.