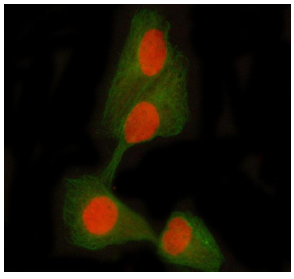
STAT5A/B Antibody / Signal transducer and activator of transcription 5 (FY12778)

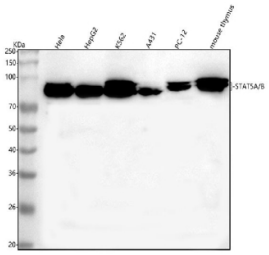
Catalog No.	Formulation	Size
FY12778	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

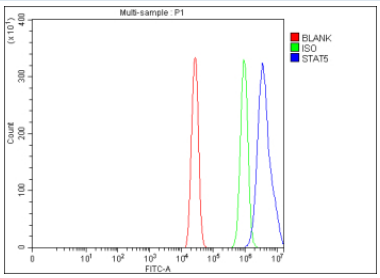
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P42229, P51692
Localization	Cytoplasm, Nucleus
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This STAT5A/B antibody is available for research use only.



Immunofluorescent staining of STAT5A/B using anti-STAT5A/B antibody (red) and anti-Beta Tubulin antibody (green). STAT5A/B was detected in immunocytochemical section of HELA cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-STAT5A/B antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG and DyLight 488 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of STAT5A/B using anti-STAT5A/B antibody. Lane 1: human Hela whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: human whole cell lysates, Lane 5: rat PC-12 whole cell lysates, Lane 6: mouse thymus tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-STAT5A/B antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A doublet is observed between ~85-90 kDa, corresponding to STAT5A and STAT5B isoforms (predicted ~91 kDa). The minor migration difference reflects known phosphorylation- and isoform-dependent mobility shifts.



Flow Cytometry analysis of cells using anti-STAT5A/B antibody. Overlay histogram showing cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-STAT5A/B antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Description

STAT5A/B antibody detects Signal transducer and activator of transcription 5A and 5B, two closely related transcription factors that mediate cytokine, hormone, and growth factor signaling. Encoded by the STAT5A and STAT5B genes on chromosome 17q21.2, these proteins are members of the STAT family that become phosphorylated and activated downstream of Janus kinases (JAKs). STAT5A and STAT5B share more than 90% sequence identity and function cooperatively to regulate transcription of genes involved in proliferation, survival, and differentiation, particularly in hematopoietic, immune, and mammary tissues.

Upon activation by cytokines such as prolactin, interleukin-2, and growth hormone, STAT5A/B are phosphorylated on a conserved tyrosine residue (Y694 in STAT5A, Y699 in STAT5B), leading to dimerization and nuclear translocation. In the nucleus, they bind specific DNA motifs (GAS elements) to induce transcription of target genes including BCL2L1, CISH, SOCS2, and CCND1. These targets control cell survival, feedback inhibition, and differentiation pathways across multiple systems. STAT5A plays key roles in mammary gland development and lactation, while STAT5B predominantly regulates growth hormone signaling and immune function.

The STAT5A/B antibody is widely used in signal transduction, oncology, and immunology research to detect both STAT5 isoforms in total or phosphorylated forms. Western blot analysis identifies bands near 90 kilodaltons corresponding to STAT5A and STAT5B, while immunofluorescence reveals nuclear accumulation following cytokine stimulation. This antibody supports studies of JAK/STAT pathway activation, cytokine signaling, and transcriptional regulation in various tissues.

Dysregulation of STAT5 signaling is implicated in leukemias, lymphomas, and solid tumors, where constitutive activation promotes oncogenic transformation and resistance to apoptosis. Aberrant STAT5 activity also contributes to autoimmune and inflammatory diseases. The STAT5A/B antibody enables researchers to evaluate STAT pathway activation in both physiological and pathological contexts. NSJ Bioreagents provides this antibody validated for its applications, ensuring precise detection in studies of cytokine-mediated transcription and signal transduction.

Application Notes

Optimal dilution of the STAT5A/B antibody should be determined by the researcher.

Immunogen

E.coli-derived human STAT5A/B recombinant protein (Position: K359-R790) was used as the immunogen for the STAT5A/B antibody.

Storage

After reconstitution, the STAT5A/B antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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