SANTA CRUZ BIOTECHNOLOGY, INC.

p-Stat5a (Ser 127/128): sc-33043

BACKGROUND

Stat5 (signal transducers and activators of transcription 5) is important in regulating T cell functions involving the receptors for interleukin-2 (IL-2). IL-2 stimulates the rapid phosphorylation of both serine and tyrosine residues of Stat5a and Stat5b in human T lymphocytes and in several IL-2-responsive lymphocytic cell lines. IL-2 differentially induces serine phosphorylation of Stat5a and Stat5b on Ser 726 and Ser 731, respectively. Stat5b is preferentially phosphorylated and displays more protracted serine phosphorylation kinetics than Stat5a. Both the acid-rich region and the COOH terminus of IL-2Rb can independently mediate IL-2-induced Stat5a/b serine phosphorylation, suggesting that Stat5a/b serine phosphorylation occurs at a postreceptor level. Stat5a is phosphorylated on Tyr 694 in a Prolactin-sensitive manner, whereas serine phosphorylation is constitutive. Activation of Stat5 by IL-2 may help govern the biological effects of IL-2 during the immune response. Ser 779 is constitutively phosphorylated in the mammary gland, and Ser 725 phosphorylation influences Prolactin-stimulated *in vitro* DNA binding activity.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: STAT5A (human) mapping to 17q11.2; Stat5a (mouse) mapping to 11 D.

SOURCE

p-Stat5a (Ser 127/128) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 127 and 128 of Stat5a of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-33043 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Stat5a (Ser 127/128) is recommended for detection of Ser 127 and 128 dually phosphorylated Stat5a of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with correspondingly phosphorylated Stat5b.

Suitable for use as control antibody for Stat5a siRNA (h): sc-37008 and Stat5a siRNA (m): sc-37009.

Molecular Weight of p-Stat5a: 92 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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