

# p-Stat1 (Ser 727): sc-16570

## 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 the various Stat transcription factors. Stat1 and Stat2 are induced by IFN- $\alpha$  and form a heterodimer which is part of the ISGF3 transcription factor complex. Although early reports indicate Stat3 activation by EGF and IL-6, it has been shown that Stat3 $\beta$  appears to be activated by both while Stat3 $\alpha$  is activated by EGF, but not by IL-6. Highest expression of Stat4 is seen in testis and Myeloid cells. IL-12 has been identified as an activator of Stat4. Stat5 has been shown to be activated by Prolactin and by IL-3. Stat6 is involved in IL-4 activated signaling pathways.

## CHROMOSOMAL LOCATION

Genetic locus: STAT1 (human) mapping to 2q32.2; Stat1 (mouse) mapping to 1 C1.1.

## SOURCE

p-Stat1 (Ser 727) is available as either goat (sc-16570) or rabbit (sc-16570-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 727 phosphorylated Stat1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16570 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-16570 X, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

p-Stat1 (Ser 727) is recommended for detection of Ser 727 phosphorylated Stat1 $\beta$  p84 and Stat1 $\alpha$  p91 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

p-Stat1 (Ser 727) is also recommended for detection of correspondingly phosphorylated Stat1 $\beta$  p84 and Stat1 $\alpha$  p91 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for Stat1 p84/p91 siRNA (h): sc-44123, Stat1 p84/p91 siRNA (m): sc-44124, Stat1 p84/p91 shRNA Plasmid (h): sc-44123-SH, Stat1 p84/p91 shRNA Plasmid (m): sc-44124-SH, Stat1 p84/p91 shRNA (h) Lentiviral Particles: sc-44123-V and Stat1 p84/p91 shRNA (m) Lentiviral Particles: sc-44124-V.

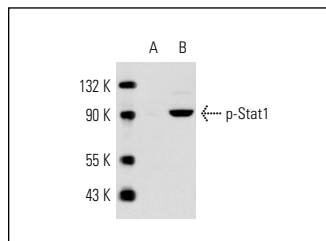
p-Stat1 (Ser 727) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of p-Stat1: 91 kDa.

## STORAGE

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

## DATA



p-Stat1 (Ser 727)-R: sc-16570-R. Western blot analysis of Stat1 p91 phosphorylation in untreated (A) and IFN- $\alpha$ -treated (B) SK-MEL-28 whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Ishihara, K., et al. 2001. Possible participation of a JAK2 signaling pathway in recombinant rat interleukin-5-induced prolongation of rat eosinophil survival. *Biochim. Biophys. Acta* 1536: 73-84.
2. Bowie, M.L., et al. 2007. Interferon regulatory factor-1 regulates reconstituted extracellular matrix (rECM)-mediated apoptosis in human mammary epithelial cells. *Oncogene* 26: 2017-2026.
3. McLaren, J., et al. 2007. Epstein-Barr virus induces a distinct form of DNA-bound STAT1 compared with that found in interferon-stimulated B lymphocytes. *J. Gen. Virol.* 88: 1876-1886.
4. Choi, J.C., et al. 2009. Histone deacetylases inhibit IFN- $\gamma$ -inducible gene expression in mouse trophoblast cells. *J. Immunol.* 182: 6307-6315.
5. Napione, L., et al. 2012. IL-12-dependent innate immunity arrests endothelial cells in G<sub>0</sub>-G<sub>1</sub> phase by a p21<sup>Cip1/Waf1</sup>-mediated mechanism. *Angiogenesis* 15: 713-725.
6. Feng, X., et al. 2012. Type I interferon signature is high in lupus and neuromyelitis optica but low in multiple sclerosis. *J. Neurol. Sci.* 313: 48-53.
7. Vogelsang, P., et al. 2014. Altered phenotype and Stat1 expression in Toll-like receptor 7/8 stimulated monocyte-derived dendritic cells from patients with primary Sjögren's syndrome. *Arthritis. Res. Ther.* 16: R166.

## RESEARCH USE

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



Try **p-Stat1 p84/p91 (PSM1): sc-51700**, our highly recommended monoclonal alternative to p-Stat1 (Ser 727).