

p-Stat1 (Tyr 701): sc-135648

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- α 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 β appears to be activated by both while Stat3 α 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. Mouse, rat and human Stat1 are phosphorylated on tyrosine and serine residues, specifically Tyr 701 which is phosphorylated by JAK1, which promotes dimerization, allowing Stat1 to be translocated to the nucleus.

CHROMOSOMAL LOCATION

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

SOURCE

p-Stat1 (Tyr 701) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 701 phosphorylated Stat1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

p-Stat1 (Tyr 701) is recommended for detection of Tyr 701 phosphorylated Stat1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

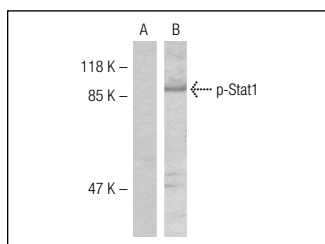
Suitable for use as control antibody for Stat1 p84/p91 siRNA (h): sc-44123, Stat1 p84/p91 siRNA (m): sc-44124, Stat1 p84/p91 shRNA Plasmid (h): sc-44123-SH, Stat1 p84/p91 shRNA Plasmid (m): sc-44124-SH, Stat1 p84/p91 shRNA (h) Lentiviral Particles: sc-44123-V and Stat1 p84/p91 shRNA (m) Lentiviral Particles: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

Molecular Weight of p-Stat1: 91 kDa.

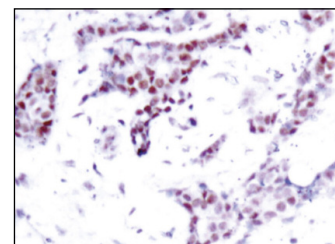
RECOMMENDED SECONDARY REAGENTS

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), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-Stat1 (Tyr 701): sc-135648. Western blot analysis of phosphorylated Stat1 expression in untreated (A) and EGF-treated (B) MCF7 cell extracts.



p-Stat1 (Tyr 701): sc-135648. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Stebulis, J.A., et al. 2005. Fibroblast-like synovial cells derived from synovial fluid. *J. Rheumatol.* 32: 301-306.
- Lidbury, B.A., et al. 2011. Identification and characterization of a Ross River virus variant that grows persistently in macrophage, shows altered disease kinetics in a mouse model and exhibits resistance to type I interferon. *J. Virol.* 85: 5651-5663.
- Yin, S.Y., et al. 2011. Interleukin-4 enhances trafficking and functional activities of GM-CSF-stimulated mouse myeloid-derived dendritic cells at late differentiation stage. *Exp. Cell Res.* 317: 2210-2221.
- Singh, P.P., et al. 2011. Exosomes released from *M. tuberculosis* infected cells can suppress IFN- γ mediated activation of naïve macrophages. *PLoS ONE* 6: e18564.
- Ying, M., et al. 2013. Bortezomib sensitizes human acute myeloid leukemia cells to all-*trans*-retinoic acid-induced differentiation by modifying the RAR α /STAT1 axis. *Mol. Cancer Ther.* 12: 195-206.



Try **p-Stat1 (A-2): sc-8394** or **p-Stat1 (pY701.4A): sc-136229**, our highly recommended monoclonal alternatives to p-Stat1 (Tyr 701).