Stat1 p84/p91 (M-22): sc-592

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BIOTECHNOLOGY

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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 Stat3β appears to be activated by both while Stat3α 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

Stat1 p84/p91 (M-22) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Stat1 p84/p91 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-592 P, (100 µg 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-592 X, 200 µg/0.1 ml.

APPLICATIONS

Stat1 p84/p91 (M-22) is recommended for detection of Stat1β p84 and Stat1α p91 of mouse, rat, human and *Xenopus laevis* 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Stat1 p84/p91 (M-22) is also recommended for detection of Stat1β p84 and Stat1α p91 in additional species, including equine, canine, bovine and porcine.

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.
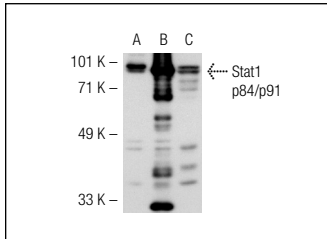
Stat1 p84/p91 (M-22) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

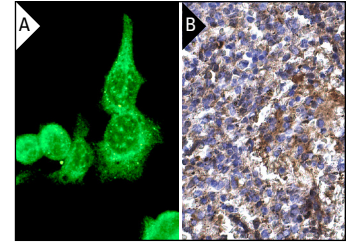Molecular Weight of Stat1 p84/p91: 86/91 kDa.

STORAGE

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

DATA

Stat1 p84/p91 (M-22): sc-592. Western blot analysis of Stat1 p84/p91 expression in non-transfected 293T: sc-117752 (**A**), mouse Stat1 p84/p91 transfected 293T: sc-123815 (**B**) and HeLa (**C**) whole cell lysates.

Stat1 p84/p91 (M-22): sc-592. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear staining (**A**), Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in red pulp (**B**).

SELECT PRODUCT CITATIONS

1. Nguyen, H., et al. 1997. Activation of multiple growth regulatory genes following inducible expression of IRF-1 or IRF/RelA fusion proteins. Oncogene 15: 1425-1435.

2. Dimitrova, P., et al. 2010. The role of properdin in murine zymosan-induced arthritis. Mol. Immunol. 47: 1458-1466.

3. Rieder, M., et al. 2011. Genetic dissection of interferon-antagonistic functions of rabies virus phosphoprotein: inhibition of interferon regulatory factor 3 activation is important for pathogenicity. J. Virol. 85: 842-852.

4. Schneckenleithner, C., et al. 2011. Putting the brakes on mammary tumorigenesis: loss of STAT1 predisposes to intraepithelial neoplasias. Oncotarget 2: 1043-1054.

5. Warsch, W., et al. 2011. High STAT5 levels mediate imatinib resistance and indicate disease progression in chronic myeloid leukemia. Blood 117: 3409-3420.

6. Dedoni, S., et al. 2012. Type I interferons impair BDNF-induced cell signaling and neurotrophic activity in differentiated human SH-SY5Y neuroblastoma cells and mouse primary cortical neurons. J. Neurochem. 122: 58-71.

7. Marzano, V., et al. 2012. Proteomic profiling of ATM kinase proficient and deficient cell lines upon blockage of proteasome activity. J. Proteomics 75: 4632-4646.

RESEARCH USE

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

MONOS
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Try **Stat1 p84/p91 (C-136): sc-464** or **Stat1 p84/p91 (B-9): sc-271661**, our highly recommended monoclonal alternatives to Stat1 p84/p91 (M-22). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Stat1 p84/p91 (C-136): sc-464**.