

Stat1 (B-9): sc-271661

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.

CHROMOSOMAL LOCATION

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

SOURCE

Stat1 (B-9) is a mouse monoclonal antibody raised against amino acids 74-165 mapping near the N-terminus of Stat1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Stat1 (B-9) is recommended for detection of Stat1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Stat1 siRNA (h): sc-44123, Stat1 siRNA (m): sc-44124, Stat1 siRNA (r): sc-61879, Stat1 shRNA Plasmid (h): sc-44123-SH, Stat1 shRNA Plasmid (m): sc-44124-SH, Stat1 shRNA Plasmid (r): sc-61879-SH, Stat1 shRNA (h) Lentiviral Particles: sc-44123-V, Stat1 shRNA (m) Lentiviral Particles: sc-44124-V and Stat1 shRNA (r) Lentiviral Particles: sc-61879-V.

Molecular Weight of Stat1 α : 91 kDa.

Molecular Weight of Stat1 β : 84 kDa.

Positive Controls: Stat1 (m): 293T Lysate: sc-123815, HUV-EC-C whole cell lysate: sc-364180 or A-431 whole cell lysate: sc-2201.

STORAGE

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

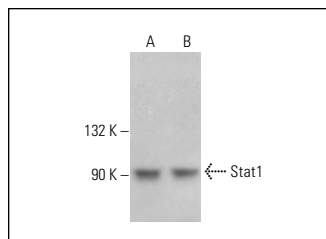
PROTOCOLS

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

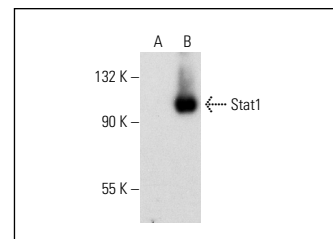
RESEARCH USE

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

DATA



Stat1 (B-9): sc-271661. Western blot analysis of Stat1 expression in HUV-EC-C (A) and A-431 (B) whole cell lysates.



Stat1 (B-9): sc-271661. Western blot analysis of Stat1 expression in non-transfected: sc-117752 (A) and mouse Stat1 transfected: sc-123815 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Yang, K.T., et al. 2011. Bcr-Abl oncogene stimulates Jab1 expression via cooperative interaction of β -catenin and Stat1 in chronic myeloid leukemia cells. *J. Cell. Physiol.* 226: 2849-2856.
- Zhang, M., et al. 2011. Regulation of antiviral innate immunity by deubiquitinase CYLD. *Cell. Mol. Immunol.* 8: 502-504.
- Zhang, F., et al. 2013. Astrocyte elevated gene-1 interacts with β -catenin and increases migration and invasion of colorectal carcinoma. *Mol. Carcinog.* 52: 603-610.
- Handy, I. and Patel, R.C. 2013. Stat1 requirement for PKR-induced cell cycle arrest in vascular smooth muscle cells in response to heparin. *Gene* 524: 15-21.
- Nair, S., et al. 2016. Global functional profiling of human ubiquitome identifies E3 ubiquitin ligase DCST1 as a novel negative regulator of type-I interferon signaling. *Sci. Rep.* 6: 36179.
- Sasmita, A.O., et al. 2018. Madecassoside activates anti-neuroinflammatory mechanisms by inhibiting lipopolysaccharide-induced microglial inflammation. *Int. J. Mol. Med.* 41: 3033-3040.
- Naranjo, N.M., et al. 2021. IFIT3 (interferon induced protein with tetratricopeptide repeats 3) modulates Stat1 expression in small extracellular vesicles. *Biochem. J.* 478: 3905-3921.
- Colasanti, T., et al. 2022. The prostacyclin analogue iloprost modulates CXCL10 in systemic sclerosis. *Int. J. Mol. Sci.* 23: 10150.
- Holgado, A., et al. 2023. A20 is a master switch of IL-33 signalling in macrophages and determines IL-33-induced lung immunity. *J. Allergy Clin. Immunol.* 152: 244-256.e4.



See **Stat1 (C-136): sc-464** for Stat1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.