

Stat2 (22): sc-136079

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.

REFERENCES

- Zhong, Z., et al. 1994. Stat3: a Stat family member activated by tyrosine phosphorylation in response to epidermal growth factor and interleukin-6. *Science* 264: 95-98.
- Darnell, J.E., et al. 1994. JAK-Stat pathways and transcriptional activation in response to IFNs and other extracellular signaling proteins. *Science* 264: 1415-1421.
- Hou, J., et al. 1994. An interleukin-4-induced transcription factor: IL-4 Stat. *Science* 265: 1701-1706.
- Yamamoto, K., et al. 1994. Stat4, a novel γ interferon activation site-binding protein expressed in early myeloid differentiation. *Mol. Cell. Biol.* 14: 4342-4349.
- Pallard, C., et al. 1995. Interleukin-3, erythropoietin, and prolactin activate a Stat5-like factor in lymphoid cells. *J. Biol. Chem.* 270: 15942-15945.
- Qureshi, S.A., et al. 1995. Tyrosine-phosphorylated Stat1 and Stat2 plus a 48-kDa protein all contact DNA in forming interferon-stimulated-gene factor 3. *Proc. Nat. Acad. Sci. USA* 92: 3829-3833.
- Schaefer, T.S., et al. 1995. Cooperative transcriptional activity of Jun and Stat3 β , a short form of Stat3. *Proc. Nat. Acad. Sci. USA* 92: 9097-9091.
- Schindler, C., et al. 1995. transcriptional responses to polypeptide ligands: the JAK-Stat pathway. *Annu. Rev. Biochem.* 64: 621-651.
- Elliott, J., et al. 2007. Respiratory syncytial virus NS1 protein degrades Stat2 by using the Elongin-Cullin E3 ligase. *J. Virol.* 81: 3428-3436.

CHROMOSOMAL LOCATION

Genetic locus: STAT2 (human) mapping to 12q13.3.

SOURCE

Stat2 (22) is a mouse monoclonal antibody raised against amino acids 1-178 of Stat2 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

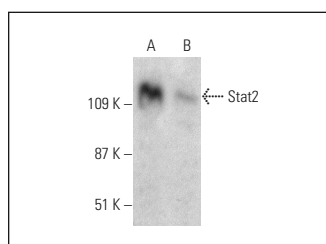
Stat2 (22) is recommended for detection of Stat2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Stat2 siRNA (h): sc-29492, Stat2 shRNA Plasmid (h): sc-29492-SH and Stat2 shRNA (h) Lentiviral Particles: sc-29492-V.

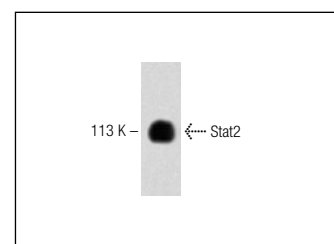
Molecular Weight of Stat2: 113 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Ramos cell lysate: sc-2216 or HeLa whole cell lysate: sc-2200.

DATA



Stat2 (22): sc-136079. Western blot analysis of Stat2 expression in Ramos (A) and HeLa (B) whole cell lysates.



Stat2 (22): sc-136079. Western blot analysis of Stat2 expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

- Lange, C.M., et al. 2014. Vitamin D receptor and Jak-STAT signaling crosstalk results in calcitriol-mediated increase of hepatocellular response to IFN- α . *J. Immunol.* 192: 6037-6044.
- Sun, M.D., et al. 2018. Long noncoding RNA UCA1 promotes cell proliferation, migration and invasion of human leukemia cells via sponging miR-126. *Eur. Rev. Med. Pharmacol. Sci.* 22: 2233-2245.

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. Not for resale.

PROTOCOLS

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



See **Stat2 (B-3): sc-514193** for Stat2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.