# Stat2 (m2): 293T Lysate: sc-179529



The Power to Question

## **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 expresion 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.
- 3. Hou, J., et al. 1994. An interleukin-4-induced transcription factor: IL-4 Stat. Science 265: 1701-1706.
- 4. Yamamoto, K., et al. 1994. Stat4, a novel  $\gamma$  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.
- 6. 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 Stat3β, a short form of Stat3. Proc. Nat. Acad. Sci. USA 92: 9097-9091.
- 8. Schindler, C., et al. 1995. transcriptional responses to polypeptide ligands: the JAK-Stat pathway. Annu. Rev. Biochem. 64: 621-651.
- 9. 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 (mouse) mapping to 10 D3.

## **PRODUCT**

Stat2 (m2): 293T Lysate represents a lysate of mouse Stat2 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## **APPLICATIONS**

Stat2 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Stat2 antibodies. Recommended use: 10-20 µl per lane.

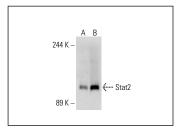
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Stat2 (A-9): sc-166201 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Stat2 expression in Stat2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

#### **DATA**



Stat2 (A-9): sc-166201. Western blot analysis of Stat2 expression in non-transfected: sc-117752 (**A**) and mouse Stat2 transfected: sc-179529 (**B**) 293T whole cell Iwsates

## **RESEARCH USE**

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

#### **PROTOCOLS**

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