SANTA CRUZ BIOTECHNOLOGY, INC.

Stat2 (H-190): sc-22816

SANTA CRUZ BIOTECHNOLOGY

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-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: STAT2 (human) mapping to 12q13.3; Stat2 (mouse) mapping to 10 D3.

SOURCE

Stat2 (H-190) is a rabbit polyclonal antibody raised against amino acids 662-851 of Stat2 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-22816 X, 200 µg/0.1 ml.

APPLICATIONS

Stat2 (H-190) is recommended for detection of Stat2 of mouse, rat and human 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).

Suitable for use as control antibody for Stat2 siRNA (h): sc-29492, Stat2 siRNA (m): sc-37272, Stat2 shRNA Plasmid (h): sc-29492-SH, Stat2 shRNA Plasmid (m): sc-37272-SH, Stat2 shRNA (h) Lentiviral Particles: sc-29492-V and Stat2 shRNA (m) Lentiviral Particles: sc-37272-V.

Stat2 (H-190) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Stat2: 113 kDa.

Positive Controls: ZR-75-1 cell lysate: sc-2241, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

RESEARCH USE

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

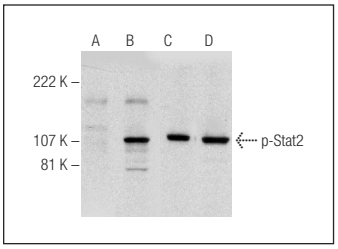
PROTOCOLS

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

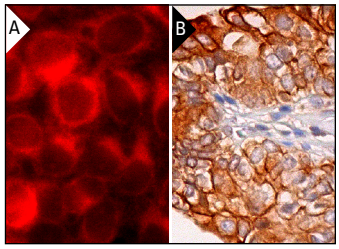
STORAGE

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

DATA



Western blot analysis of Stat2 phosphorylation in untreated (**A**,**C**) and IFNα treated (**B**,**D**) HeLa whole cell lysates. Antibodies tested include p-Stat2 (Tyr 690)-R: sc-21689-R (**A**,**B**) and Stat2 (H-190): sc-22816 (**C**,**D**).



Stat2 (H-190): sc-22816. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic and membrane staining of urothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Paulus, C., et al. 2006. A human cytomegalovirus antagonist of type I IFN-dependent signal transducer and activator of transcription signaling. Proc. Natl. Acad. Sci. USA 103: 3840-3845.
2. Flammer, J.R., et al. 2010. The type I interferon signaling pathway is a target for glucocorticoid inhibition. Mol. Cell. Biol. 30: 4564-4574.
3. Jaworska, J., et al. 2010. Divergent susceptibilities of human herpesvirus 6 variants to type I interferons. Proc. Natl. Acad. Sci. USA 107: 8369-8374.
4. Schmid, S., et al. 2010. Transcription factor redundancy ensures induction of the antiviral state. J. Biol. Chem. 285: 42013-42022.
5. Dimitropoulou, P., et al. 2010. Differential relocation and stability of PML-body components during productive human cytomegalovirus infection: detailed characterization by live-cell imaging. Eur. J. Cell Biol. 89: 757-768.
6. Knoblach, T., et al. 2011. Human cytomegalovirus IE1 protein elicits a type II interferon-like host cell response that depends on activated STAT1 but not interferon-γ. PLoS Pathog. 7: e1002016.
7. Reitsma, J.M., et al. 2013. Human cytomegalovirus IE1 protein disrupts interleukin-6 signaling by sequestering STAT3 in the nucleus. J. Virol. 87: 10763-10776.