SANTA CRUZ BIOTECHNOLOGY, INC.

Stat2 (A-9): sc-166201

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 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.

CHROMOSOMAL LOCATION

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

SOURCE

Stat2 (A-9) is a mouse monoclonal antibody raised against amino acids 662-851 of Stat2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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-166201 X, 200 µg/0.1 ml.

APPLICATIONS

Stat2 (A-9) is recommended for detection of Stat2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (A-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Stat2: 113 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Ramos cell lysate: sc-2216 or ZR-75-1 cell lysate: sc-2241.

RESEARCH USE

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

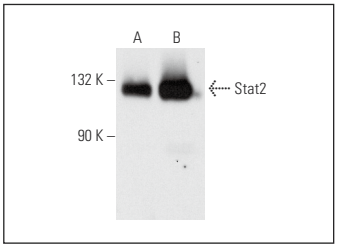
PROTOCOLS

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

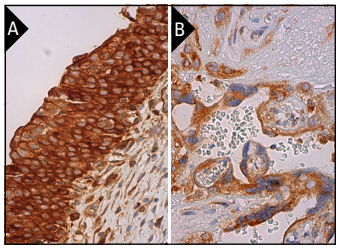
STORAGE

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

DATA



Stat2 (A-9): sc-166201. Western blot analysis of Stat2 expression in ZR-75-1 (**A**) and Ramos (**B**) whole cell lysates.



Stat2 (A-9): sc-166201. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells and decidual cells (**B**).

SELECT PRODUCT CITATIONS

1. Kolosenko, I., et al. 2015. Cell crowding induces interferon regulatory factor 9, which confers resistance to chemotherapeutic drugs. Int. J. Cancer 136: E51-E61.
2. Sugai, A., et al. 2017. Nipah and Hendra virus nucleoproteins inhibit nuclear accumulation of signal transducer and activator of transcription 1 (Stat1) and Stat2 by interfering with their complex formation. J. Virol. 91: e01136-17.
3. van der Poel, M., et al. 2019. Transcriptional profiling of human microglia reveals grey-white matter heterogeneity and multiple sclerosis-associated changes. Nat. Commun. 10: 1139.
4. Lei, J.J., et al. 2019. Long noncoding RNA CDKN2B-AS1 interacts with transcription factor BCL11A to regulate progression of cerebral infarction through mediating MAP4K1 transcription. FASEB J. 33: 7037-7048.
5. Yoshikawa, R., et al. 2019. Species-specific pathogenicity of severe fever with thrombocytopenia syndrome virus is determined by anti-Stat2 activity of NSs. J. Virol. 93: e02226-18.
6. Yuan, J., et al. 2020. Antibiotic fidaxomicin is an RdRp inhibitor as a potential new therapeutic agent against Zika virus. BMC Med. 18: 204.

CONJUGATES

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