

# Stat2 (C-20): sc-476

## 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 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.

## SOURCE

Stat2 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Stat2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g 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-476 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-476 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Stat2 (C-20) is recommended for detection of Stat2 p113 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 shRNA Plasmid (h): sc-29492-SH and Stat2 shRNA (h) Lentiviral Particles: sc-29492-V.

Stat2 (C-20) 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, ZR-75-1 cell lysate: sc-2241 or Ramos cell lysate: sc-2216.

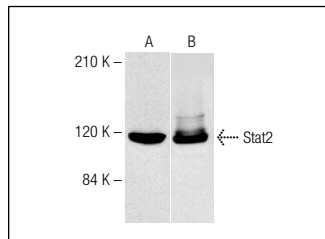
## STORAGE

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

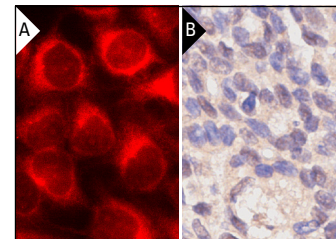
## RESEARCH USE

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

## DATA



Western blot analysis of Stat2 p113 expression in Ramos cells (A,B). Antibodies tested include Stat2 (A-7): sc-1668 (A) and Stat2 (C-20): sc-476 (B).



Stat2 (C-20): sc-476. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing cytoplasmic and nuclear staining (B).

## SELECT PRODUCT CITATIONS

- Ghislain, J.J. and Fish, E.N. 1996. Application of genomic DNA affinity chromatography identifies multiple interferon- $\alpha$ -regulated Stat2 complexes. *J. Biol. Chem.* 271: 12408-12413.
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- Masotti, A., et al. 2015. HIV-1 gp120 influences the expression of microRNAs in human monocyte-derived dendritic cells via STAT3 activation. *BMC Genomics* 16: 480.

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Try **Stat2 (B-3): sc-514193** or **Stat2 (A-9): sc-166201**, our highly recommended monoclonal alternatives to Stat2 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Stat2 (B-3): sc-514193**.