SANTA CRUZ BIOTECHNOLOGY, INC.

Stat4 (H-119): sc-7959

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: STAT4 (human) mapping to 2q32.2; Stat4 (mouse) mapping to 1 C1.1.

SOURCE

Stat4 (H-119) is a rabbit polyclonal antibody raised against amino acids 45-163 of Stat4 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-7959 X, 200 µg/0.1 ml.

APPLICATIONS

Stat4 (H-119) is recommended for detection of Stat4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Stat4 (H-119) is also recommended for detection of Stat4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Stat4 siRNA (h): sc-36568, Stat4 siRNA (m): sc-36569, Stat4 shRNA Plasmid (h): sc-36568-SH, Stat4 shRNA Plasmid (m): sc-36569-SH, Stat4 shRNA (h) Lentiviral Particles: sc-36568-V and Stat4 shRNA (m) Lentiviral Particles: sc-36569-V.

Stat4 (H-119) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Stat4: 89 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, rat testis extract: sc-2400 or mouse testis extract: sc-2405.

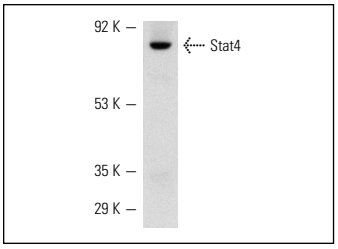
STORAGE

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



Stat4 (H-119): sc-7959. Western blot analysis of Stat4 expression in mouse testis extract.

SELECT PRODUCT CITATIONS

1. Parrello, T., et al. 2000. Up-regulation of the IL-12 receptor β2 chain in Crohn's disease. J. Immunol. 165: 7234-7239.
2. Leong, P.L., et al. 2003. Targeted inhibition of Stat3 with a decoy oligonucleotide abrogates head and neck cancer cell growth. Proc. Natl. Acad. Sci. USA 100: 4138-4143.
3. Cameron, L., et al. 2006. Th2 cell-selective enhancement of human IL-13 transcription by IL-13-1112C>T, a polymorphism associated with allergic inflammation. J. Immunol. 177: 8633-8642.
4. Tyler, D.R., et al. 2007. Pre-assembly of STAT4 with the human IFN-α/β receptor-2 subunit is mediated by the STAT4 N-domain. Mol. Immunol. 44: 1864-1872.
5. Ouaked, N., et al. 2009. Regulation of the foxp3 gene by the Th1 cytokines: the role of IL-27-induced STAT1. J. Immunol. 182: 1041-1049.
6. Zhang, H., et al. 2010. STAT3 controls myeloid progenitor growth during emergency granulopoiesis. Blood 116: 2462-2471.
7. Bieber, A.J., et al. 2010. Allelic variation in the Tyk2 and EGF genes as potential genetic determinants of CNS repair. Proc. Natl. Acad. Sci. USA 107: 792-797.
8. Huang, Y., et al. 2011. Interleukin-12 treatment down-regulates STAT4 and induces apoptosis with increasing ROS production in human natural killer cells. J. Leukoc. Biol. 90: 87-97.

PROTOCOLS

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