

Stat3 (6C18): sc-81001

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 ISGF-3 transcription factor complex. Although early reports indicate Stat3 activation by EGF and IL-6, it has been shown that Stat3 β appears to be activated by both while Stat3 α 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.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: STAT3 (human) mapping to 17q21.2; Stat3 (mouse) mapping to 11 D.

SOURCE

Stat3 (6C18) is a mouse monoclonal antibody raised against amino acids 1-202 of recombinant Stat3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Stat3 (6C18) is recommended for detection of Stat3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Stat3 siRNA (h): sc-29493, Stat3 siRNA (m): sc-29494, Stat3 siRNA (r): sc-270027, Stat3 shRNA Plasmid (h): sc-29493-SH, Stat3 shRNA Plasmid (m): sc-29494-SH, Stat3 shRNA Plasmid (r): sc-270027-SH, Stat3 shRNA (h) Lentiviral Particles: sc-29493-V, Stat3 shRNA (m) Lentiviral Particles: sc-29494-V and Stat3 shRNA (r) Lentiviral Particles: sc-270027-V.

Molecular Weight of Stat3 α : 91 kDa.

Molecular Weight of Stat3 β : 86 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.