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

**SOURCE**

p-Stat3 (Tyr 705) is available as either goat (sc-7993) or rabbit (sc-7993-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 705 phosphorylated Stat3 of human origin.

**PRODUCT**

Each vial contains either 100 µg (sc-7993) or 200 µg (sc-7993-R) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7993 P, (100 µg peptide shipment. Non-hazardous. No MSDS required.

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

**APPLICATIONS**

p-Stat3 (Tyr 705) is recommended for detection of Tyr 705 phosphorylated Stat3 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).


p-Stat3 (Tyr 705) X TransCruz antibody is recommended for Gel Supershift and ChiP applications.

Molecular Weight of p-Stat3α isoform: 91 kDa.

Molecular Weight of p-Stat3β isoform: 86 kDa.

**RESEARCH USE**

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

**DATA**

![Western blot analysis of phosphorylated Stat3 expression in](image)

**SELECT PRODUCT CITATIONS**


