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# Anti-STAT1α

**CATALOG No.:** PX159A SIZE: 100 µg
PX159B SIZE: 0.5 mg

**BACKGROUND:**

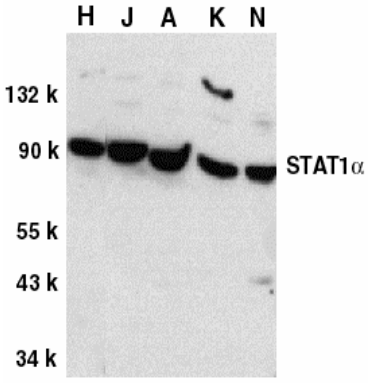
STATs (signal transducers and activators of transcription) are a family of cytoplasmic latent transcription factors that are activated to regulate gene expression in response to a large number of extracellular signaling polypeptides including cytokines, interferons, and growth factors. After phosphorylation by JAK tyrosine kinases, STATs enter the nucleus to regulate transcription of many different genes. Among the seven STATs (Stat1, Stat2, Stat3, Stat4, Stat5a, Stat5b, and Stat6), Stat1, Stat3, Stat5a, and Stat5b have a wide activation profile (1,2). STAT1 is activated by many different ligands including IFN family (IFN-α, IFN-β, IFN-γ, and IL-10), gp130 family (IL-6, IL-11, LIF, CNTF, and G-CSF), and receptor tyrosine kinases (EGF, PDGF, and CSF-1) (3). STAT1 has two forms, the 91 kDa STAT1α and the 84 kDa STAT1β, which are encoded by the same gene with splicing variant (4).

**SOURCE:**

Rabbit anti-STAT1α polyclonal antibody was raised against a peptide corresponding to amino acids 712 to 750 of human STAT1α (4). The sequences differ from the murine corresponding sequences by four amino acids.

**APPLICATION:**

This polyclonal antibody can be used for Western blot at 1:1000 to 1:2000 and for immunoprecipitation at 2 to 4 µg per sample. It is human, mouse, and rat reactive. Whole cell lysate from HeLa, Jurkat, or A431 cells can be used as positive control and a 91 kDa band can be detected to the 84 kDa STAT1β. For research use only.




Western blot analysis of STAT1α in whole cell lysates from HeLa (H), Jurkat (J), A431 (A), K562 (K), and NIH3T3 (N) cells, respectively, with anti-STAT1α at 1:1000 dilution.

**STORAGE:**

It is supplied as purified IgG, 100 µg in 200 µl of PBS containing 0.02% sodium azide. Store at -20°C. Stable for one year at 2-8°C.

**REFERENCES:**

1. Leonard WJ, O'Shea JJ. Jaks and STATs: biological implications. *Annu Rev Immunol* 1998;16:293-322.

2. Schindler C, Darnell JE Jr. Transcriptional responses to polypeptide ligands: the JAK-STAT pathway. *Annu Rev Biochem* 1995;64:621-51.

3. Darnell JE Jr. STATs and gene regulation. *Science* 1997;277:1630-5.

4. Schindler C, Fu XY, Improta T, Aebersold R, Darnell JE Jr. Proteins of transcription factor ISGF-3: one gene encodes the 91-and 84-kDa ISGF-3 proteins that are activated by interferon alpha. *Proc Natl Acad Sci USA* 1992;89:7836

**CAUTION:** NOT FOR USE IN HUMANS. FOR RESEARCH PURPOSES ONLY.

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