Stat1 Antibody

For optimal ChIP results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10^6 cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

**Application**

- Western Blotting
  - Dilution: 1:1000
- Immunoprecipitation
  - Dilution: 1:50
- Chromatin IP
  - Dilution: 1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

**Specificity / Sensitivity**

Stat1 Antibody detects endogenous levels of total Stat1 protein. The antibody detects both Stat1alpha (91kDa) and Stat1beta (84 kDa) isoforms.

**Species Reactivity:**

- Human, Mouse, Rat, Monkey

**Species predicted to react based on 100% sequence homology:**

- Bovine, Dog

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of human Stat1. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

The Stat1 transcription factor is activated in response to a large number of ligands (1) and is essential for responsiveness to IFN-α and IFN-γ (2,3). Phosphorylation of Stat1 at Tyr701 induces Stat1 dimerization, nuclear translocation, and DNA binding (4). Stat1 protein exists as a pair of isoforms, Stat1α (91 kDa) and the splice variant Stat1β (84 kDa). In most cells, both isoforms are activated by IFN-α, but only Stat1α is activated by IFN-γ. The inappropriate activation of Stat1 occurs in many tumors (5). In addition to tyrosine phosphorylation, Stat1 is also phosphorylated at Ser727 through a p38 mitogen-activated protein kinase (MAPK)-dependent pathway in response to IFN-α and other cellular stresses (6). Serine phosphorylation may be required for the maximal induction of Stat1-mediated gene activation.


**IMPORTANT:** For western blots, we recommend incubating the membrane with diluted antibody at 4°C with gentle shaking overnight. Please refer to the product-specific protocol for our antibody diluent recommendation.