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# Stat1 Antibody

Store at -20C  
#9172

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IP, ChIP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 84, 91	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P42224	<b>Entrez-Gene Id:</b> 6772
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## Product Usage Information

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

### Application

Western Blotting  
Immunoprecipitation  
Chromatin IP

### Dilution

1:1000  
1:50  
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 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.

## Background References

1. Heim, M.H. (1999) *J Recept Signal Transduct Res* 19, 75-120.
2. Durbin, J.E. et al. (1996) *Cell* 84, 443-50.
3. Meraz, M.A. et al. (1996) *Cell* 84, 431-42.
4. Ihle, J.N. et al. (1994) *Trends Biochem Sci* 19, 222-7.
5. Frank, D.A. (1999) *Mol Med* 5, 432-56.
6. Wen, Z. et al. (1995) *Cell* 82, 241-50.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting **IP:** Immunoprecipitation **ChIP:** Chromatin IP

## Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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