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## Phospho-Stat1 (Tyr701) Antibody

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

<b>Applications:</b> W, IP, ChIP	<b>Reactivity:</b> H M R	<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

#### Application

Western Blotting  
Immunoprecipitation  
Chromatin IP

#### Dilution

1:1000  
1:100  
1:25

### 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

Phospho-Stat1 (Tyr701) Antibody detects endogenous levels of Stat1 only when phosphorylated at tyrosine 701. The antibody detects phosphorylated tyrosine 701 of p91 Stat1 and also the p84 splice variant. It does not cross-react with the corresponding phospho-tyrosines of other Stat proteins.

### Species predicted to react based on 100% sequence homology

Bovine, Dog

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr701 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

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