

# Stat1 Antibody

- Small 100 µl (10 Western mini-blot)
- Large 300 µl (30 Western mini-blot)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, ChIP Endogenous	H, M, R, Mk, (B)	84, 91 kDa	Rabbit**

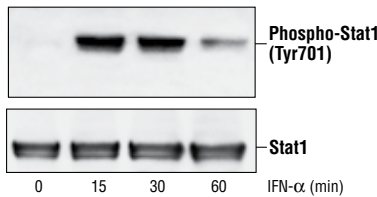
**Background:** Stat1, while activated in response to a large number of ligands (1), appears to be essential for responsiveness to IFN-α and IFN-γ (2,3). Phosphorylation of Stat1 at Tyr701 induces Stat1 dimerization, nuclear translocation and DNA binding (4). Stat1 has two isoforms, Stat1α (91 kDa) and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

**Specificity/Sensitivity:** Stat1 Antibody detects endogenous levels of total Stat1 protein. The antibody detects both Stat1α (91 kDa) and Stat1β (84 kDa) isoforms.

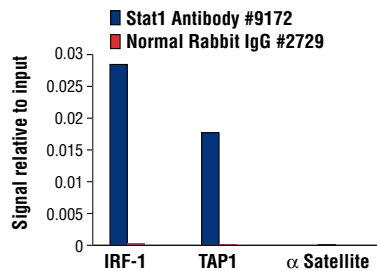
**Source/Purification:** Antibodies are produced by immunizing rabbits with a synthetic peptide (KLH-coupled) corresponding to the sequence of human Stat1. Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

- Heim, M.H. (1999) *J. Recept. Signal. Transduct. Res.* 19, 75–120.
- Durbin, J.E. et al. (1996) *Cell* 84, 443–450.
- Meraz, M.A. et al. (1996) *Cell* 84, 431–442.
- Ihle, J.N. et al. (1994) *Trends Biochem. Sci.* 19, 222–227.
- Frank, D.A. (1999) *Mol. Med.* 5, 432–456.
- Wen, Z. et al. (1995) *Cell* 82, 241–250.



Western blot analysis of extracts from SK-MEL-28 cells, untreated or IFN-α-treated (100 ng/ml), using Phospho-Stat1 (Tyr701) Antibody #9171 (upper) or Stat1 Antibody (lower).



Chromatin immunoprecipitations were performed with cross-linked chromatin from 4 x 10<sup>6</sup> HT-1080 cells treated with IFN-γ (50 ng/ml) for 30 minutes and either 20 µl of Stat1 Antibody #9172 or 2 µl of Normal Rabbit IgG #2729 using SimpleChIP™ Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by Real-Time PCR using primers specific for the IRF-1 and TAP1 genes, and the heterochromatic α Satellite repeat element (both). The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.

Entrez-Gene ID #6772  
Swiss-Prot Acc. #P42224

**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.

\*Species cross-reactivity is determined by western blot.

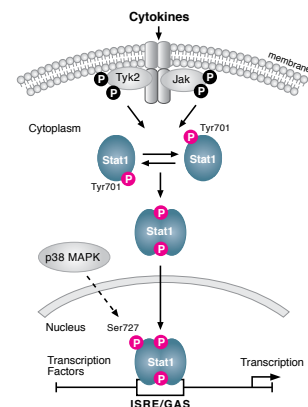
\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western Blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	1:25

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.



Stat1 Signaling Pathway

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

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.