

#9175 Store at -20°C

# Stat1 (42H3) Rabbit mAb



✓ 100 µl  
(10 western blots)

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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.

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

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IHC-P Endogenous	H, Mk	84, 91 kDa	IgG Rabbit**

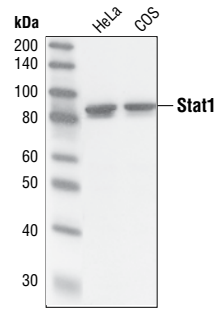
**Background:** The Stat1 transcription factor is activated in response to a large number of ligands (1) and is essential for responsiveness to IFN- $\alpha$  and IFN- $\gamma$  (2,3). Phosphorylation of Stat1 at Tyr701 induces Stat1 dimerization, nuclear translocation and DNA binding (4). Stat1 protein exists as a pair of isoforms, Stat1 $\alpha$  (91 kDa) and the splice variant Stat1 $\beta$  (84 kDa). In most cells, both isoforms are activated by IFN- $\alpha$ , but only Stat1 $\alpha$  is activated by IFN- $\gamma$ . 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- $\alpha$  and other cellular stresses (6). Serine phosphorylation may be required for the maximal induction of Stat1-mediated gene activation.

**Specificity/Sensitivity:** Stat1 (42H3) Rabbit mAb detects endogenous levels of total Stat1 protein independent of phosphorylation.

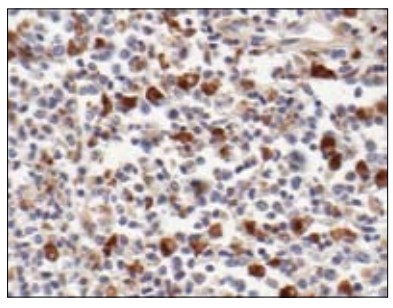
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human Stat1.

**Background References:**

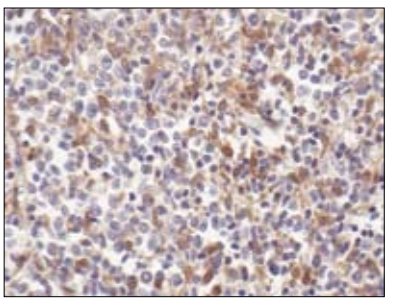
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- Durbin, J.E. et al. (1996) *Cell* 84, 443–450.
- Meraz, M.A. et al. (1996) *Cell* 84, 431–442.
- Ihle, J.N. et al. (1994) *Trends Biochem. Sci.* 19, 222–227.
- Frank, D.A. (1999) *Mol. Med.* 5, 432–456.
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Western blot analysis of extracts from HeLa and COS cells, using Stat1 (42H3) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human Non-Hodgkin's lymphoma, using Stat1 (42H3) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human MALToma, showing cytoplasmic and nuclear staining, using Stat1 (42H3) Rabbit mAb.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

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

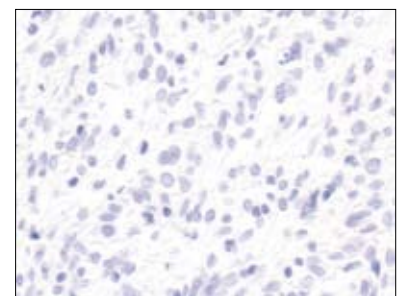
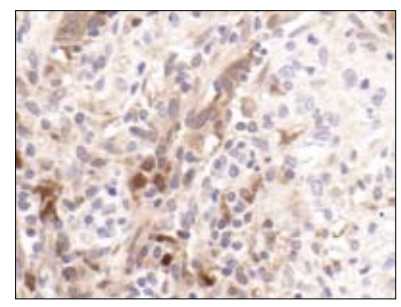
\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:200
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112

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.



Immunohistochemical analysis of paraffin-embedded human colon carcinoma, using Stat1 (42H3) Rabbit mAb in the presence of control peptide (left) or Stat1 blocking peptide (9175 specific) #1079 (right).

**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.

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