Stat1 (42H3) Rabbit mAb

#9175 Store at –20°C

☑ 100 µl
(10 western blots)

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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**

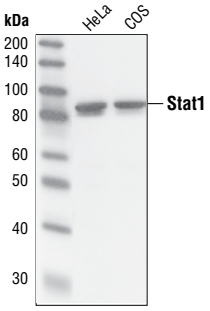
Background: The Stat1 transcription factor is activated in response to a large number of ligands (1) and is essential for responsiveness to IFN-α and IFN-γ (2,3). Phosphorylation of Stat1 at Tyr701 induces Stat1 dimerization, nuclear translocation and DNA binding (4). Stat1 protein exists as a pair of 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.

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

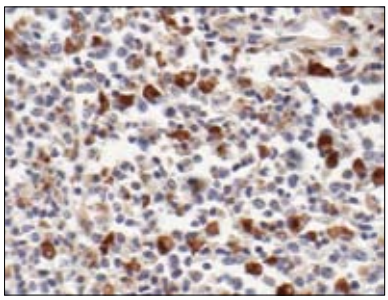
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human Stat1.

Background References:

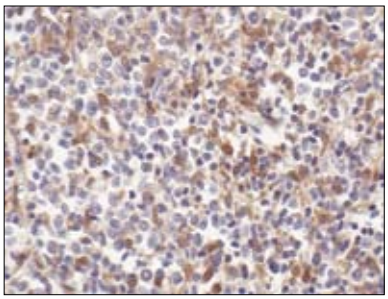
(1) Heim, M.H. (1999) *J. Recept. Signal. Transduct. Res.* 19, 75–120.
(2) Durbin, J.E. et al. (1996) *Cell* 84, 443–450.
(3) Meraz, M.A. et al. (1996) *Cell* 84, 431–442.
(4) Ihle, J.N. et al. (1994) *Trends Biochem. Sci.* 19, 222–227.
(5) Frank, D.A. (1999) *Mol. Med.* 5, 432–456.
(6) Wen, Z. et al.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



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.**

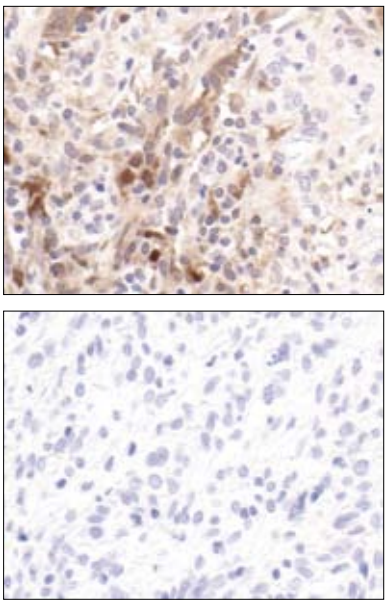
Recommended Antibody Dilutions:

Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:200†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

†*Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.*

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit 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.