

#9139 Store at -20°C

# Stat3 (124H6) Mouse 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.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IF-IC, F, ChIP Endogenous	H, M, R, Mk	79, 86 kDa	Mouse IgG2a**

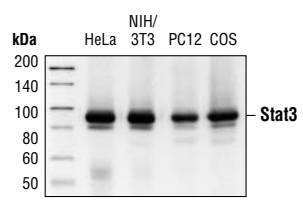
**Background:** Stat3 is a key signaling molecule for many cytokines and growth-factor receptors (1) and is required for murine fetal development (2). Additionally, Stat3 is constitutively activated in a number of human tumors (3,4) and possesses oncogenic potential (5) and anti-apoptotic activities (3). Stat3 is activated by phosphorylation at Tyr705, which induces dimerization, nuclear translocation and DNA binding (6,7). Transcriptional activation seems to be regulated by phosphorylation at Ser727 via the MAPK or mTOR pathway (8,9). Stat3 isoform expression appears to reflect biological function: the relative expression levels of Stat3α (86 kDa) and Stat3β (79 kDa) depend on cell type, ligand exposure or maturation stage of the cells (10). It is notable that Stat3β lacks the serine phosphorylation site within the carboxy-terminal transcriptional activation domain (8).

**Specificity/Sensitivity:** Stat3 (124H6) Mouse mAb detects endogenous levels of total Stat3 protein.

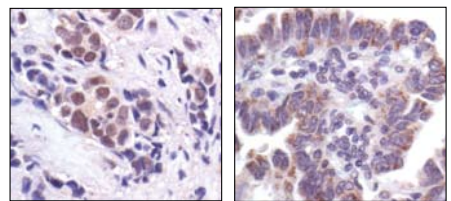
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of mouse Stat3.

**Background References:**

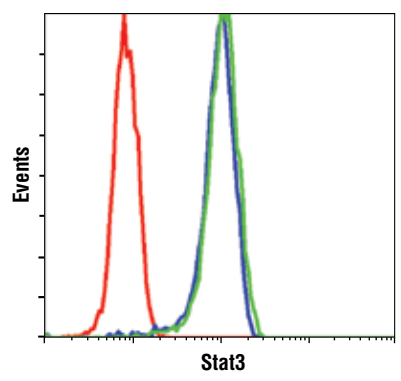
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Western blot analysis of extracts from HeLa, NIH/3T3, PC12 and COS cells, using Stat3 (124H6) Mouse mAb.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma (left), showing nuclear and cytoplasmic staining, and human lung carcinoma (right), showing cytoplasmic staining, using Stat3 (124H6) Mouse mAb.



Flow cytometric analysis of HeLa cells, untreated (blue) or IFN-α-treated (green), using Stat3 (124H6) Mouse mAb compared with a nonspecific negative control antibody (red).

Entrez-Gene ID #6774  
Swiss-Prot Acc. #P40763

**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-mouse secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:200
Immunohistochemistry (Paraffin)	1:600†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Mouse) #8125
†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.	
Immunofluorescence (IF-IC)	1:1600
IF Protocol:	Methanol Permeabilization required
Flow Cytometry	1:200
Chromatin IP	1:50

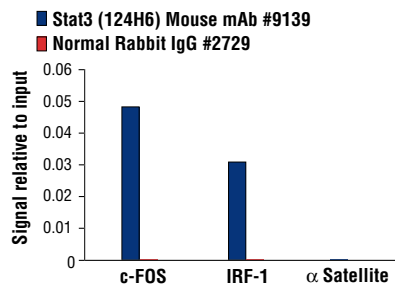
For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

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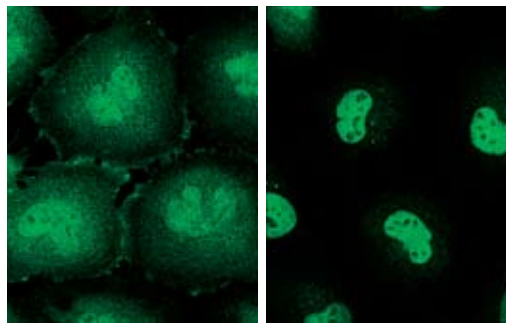
**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**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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Chromatin immunoprecipitations were performed with cross-linked chromatin from  $4 \times 10^6$  Hep G2 cells starved overnight and treated with IL-6 (100 ng/ml) for 30 minutes, and either 10  $\mu$ l of Stat3 (124H6) Mouse mAb or 2  $\mu$ l of Normal Rabbit IgG #2729 using SimpleChIP™ Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by real-time PCR using human IRF-1 promoter primers, SimpleChIP™ Human c-Fos Promoter Primers #4663, and SimpleChIP™ Human alpha Satellite Repeat Primers #4486. 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.



Confocal immunofluorescent analysis of HeLa cells either serum-starved (left) or IFN $\alpha$ -treated (right) and labeled with Stat3 (124H6) Mouse mAb (green).