

#9136 Store at -20°C

Phospho-Stat3 (Ser727) (6E4) 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.

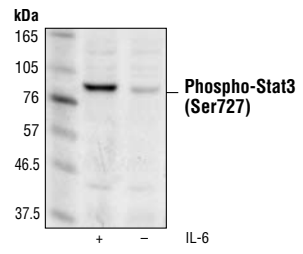
Entrez-Gene ID #6774
Swiss-Prot Acc. #P40763

Applications W Endogenous	Species Cross-Reactivity*		Molecular Wt. 86 kDa	Isotype Mouse IgM**
	H	M		

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 Stat3 α (86 kDa) and Stat3 β (79 kDa) depend on cell type, ligand exposure or maturation stage of the cells (10). It is notable that Stat3 β lacks the serine phosphorylation site within the carboxy-terminal transcriptional activation domain (8).

Specificity/Sensitivity: Phospho-Stat3 (Ser727) (6E4) Mouse mAb detects endogenous levels of Stat3 only when phosphorylated at serine 727. It does not significantly cross-react with the corresponding phosphorylated serines of other Stat proteins. The antibody does not cross-react with nonphosphorylated Stat3 or with Stat3 phosphorylated at other sites.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser727 of mouse Stat3.



Western blot analysis of extracts from serum-starved HeLa cells, untreated or IL-6-treated (100 ng/ml), using Phospho-Stat3 (Ser727) (6E4) Mouse mAb.

Background References:

- (1) Heim, M.H. (1999) *J. Recept. Signal Transduct. Res.* 19, 75–120.
- (2) Takeda, K. et al. (1997) *Proc. Natl. Acad. Sci. USA* 94, 3801–3804.
- (3) Catlett-Falcone, R. et al. (1999) *Immunity* 10, 105–115.
- (4) Garcia, R. and Jove, R. (1998) *J. Biomed. Sci.* 5, 79–85.
- (5) Bromberg, J.F. et al. (1999) *Cell* 98, 295–303.
- (6) Darnell Jr., J.E. et al. (1994) *Science* 264, 1415–1421.
- (7) Ihle, J.N. (1995) *Nature* 377, 591–594.
- (8) Wen, Z. et al. (1995) *Cell* 82, 241–250.
- (9) Yokogami, K. et al. (2000) *Curr. Biol.* 10, 47–50.
- (10) Biethahn, S. et al. (1999) *Exp. Hematol.* 27, 885–894.

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

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.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v 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.