

#98543 Store at -20°C

Phospho-Stat3 (Ser754) Antibody



Cell Signaling
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Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M	Endogenous	86	Rabbit	#P40763	6774

Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:100
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.	
Specificity / Sensitivity	Phospho-Stat3 (Ser754) Antibody recognizes endogenous levels of Stat3 protein only when phosphorylated at Ser754.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic phospho-peptide corresponding to residues surrounding Ser754 of human Stat3 protein. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	The Stat3 transcription factor is an important signaling molecule for many cytokines and growth factor receptors (1) and is required for murine fetal development (2). Research studies have shown that 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 through the MAPK or mTOR pathways (8,9). Stat3 isoform expression appears to reflect biological function as the relative expression levels of Stat3α (86 kDa) and Stat3β (79 kDa) depend on cell type, ligand exposure, or cell maturation stage (10). It is notable that Stat3β lacks the serine phosphorylation site within the carboxy-terminal transcriptional activation domain (8). Stat3 is phosphorylated by TBK1 at Ser754 in response to cytosolic DNA reducing Stat3 transcriptional activity (11).	
Background References	1. Heim, M.H. (2001) <i>J Recept Signal Transduct Res</i> 19, 75-120. 2. Takeda, K. et al. (1997) <i>Proc Natl Acad Sci U S A</i> 94, 3801-4. 3. Catlett-Falcone, R. et al. (1999) <i>Immunity</i> 10, 105-15. 4. Garcia, R. and Jove, R. (1998) <i>J Biomed Sci</i> 5, 79-85. 5. Bromberg, J.F. et al. (1999) <i>Cell</i> 98, 295-303. 6. Darnell, J.E. et al. (1994) <i>Science</i> 264, 1415-21. 7. Ihle, J.N. (1995) <i>Nature</i> 377, 591-4. 8. Wen, Z. et al. (1995) <i>Cell</i> 82, 241-50. 9. Yokogami, K. et al. (2000) <i>Curr Biol</i> 10, 47-50. 10. Biethahn, S. et al. (1999) <i>Exp Hematol</i> 27, 885-94. 11. Hsia, H.C. et al. (2017) <i>J Biol Chem</i> 292, 5405-5417.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting IP: Immunoprecipitation
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus 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 GP: Guinea Pig Rab: rabbit All: all species expected

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