#5167 Store at -20°C

Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb (Sepharose® Bead Conjugate)

Cell Signaling TECHNOLOGY®

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rev. 01/28/16

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Entrez-Gene ID #6772
UniProt ID #P42224

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
IP Endogenous	H, M	84, 91 kDa	Rabbit IgG

Description: This Cell Signaling Technology antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated Sepharose® beads. Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb (Sepharose® Bead Conjugate) is useful for the immunoprecipitation of Stat1 phosphorylated at Tyr701. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb #9167.

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: Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb (Sepharose® Bead Conjugate) detects endogenous levels of Stat1 only when phosphorylated at Tyr701. The antibody detects phosphorylated Tyr701 of p91 Stat1 and also the p84 splice variant. This antibody does not cross-react with the corresponding phospho-tyrosines of other Stat proteins.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr701 of human Stat1.

Background References:

(1) Heim, M.H. (1999) *J. Recept. Signal. Transduct. Res.* 19, 75-120.

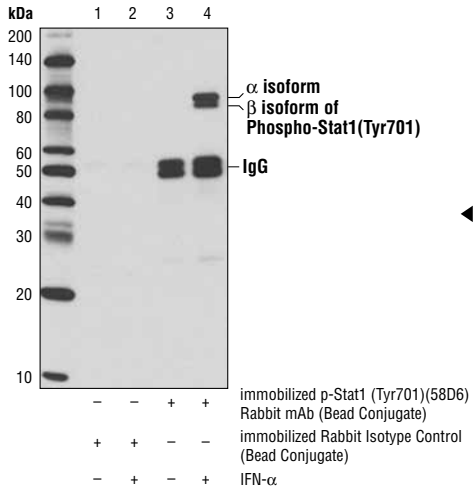
(2) Durbin, J.E. et al. (1996) *Cell* 84, 443-450.

(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.



◀ *Immunoprecipitation of HeLa cell lysates, untreated or treated with interferon-α (IFN-α), using Rabbit (DA1E) IgG mAb XP® Isotype Control (Sepharose® Bead Conjugate) #3423 (Lanes 1 and 2) and Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb (Sepharose® Bead Conjugate) (Lanes 3 and 4). The blot was probed using Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb #9167.*

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

***Species cross-reactivity other than human is determined by western blot using unconjugated antibody.**

Directions for Use: Add 10 µl of well-vortexed beads to 200 µl of cell lysate at 1 mg/ml in 1X Cell Lysis Buffer (10X) #9803. See protocol for more details.

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.

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.