

#4074 Store at -20°C

# Phospho-Stat3 (Tyr705) (D3A7) XP® Rabbit mAb (Sephacrose® Bead Conjugate)



**Cell Signaling**  
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IP	H M R Mk	Endogenous	79, 86	Rabbit IgG	#P40763	6774

<b>Product Usage Information</b>	<b>Application</b> Immunoprecipitation	<b>Dilution</b> 1:20
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol. Store at -20°C. Do not aliquot the antibodies.	
<b>Specificity / Sensitivity</b>	Phospho-Stat3 (Tyr705) (D3A7) XP® Rabbit mAb (Sephacrose® Bead Conjugate) detects endogenous levels of Stat3 only when phosphorylated at Tyr705. This antibody does not cross-react with phospho-EGFR or the corresponding phospho-tyrosines of other Stat proteins.	
<b>Species predicted to react based on 100% sequence homology:</b>	Hamster, Bovine, Pig, Horse	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr705 of mouse Stat3 protein.	
<b>Product Description</b>	This Cell Signaling Technology antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated Sephacrose® beads. Phospho-Stat3 (Tyr705) (D3A7) XP® Rabbit mAb (Sephacrose® Bead Conjugate) is useful for the immunoprecipitation of phospho-Stat3 (Tyr705). This antibody was tested using human cell lysates and is expected to exhibit the same species cross-reactivity as the unconjugated antibody (Phospho-Stat3 (Tyr705) (D3A7) XP® Rabbit mAb #9145).	

MW (kDa)

79, 86

## 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).

## Background References

1. Heim, M.H. (2001) *J Recept Signal Transduct Res* 19, 75-120.
2. Takeda, K. et al. (1997) *Proc Natl Acad Sci U S A* 94, 3801-4.
3. Catlett-Falcone, R. et al. (1999) *Immunity* 10, 105-15.
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, J.E. et al. (1994) *Science* 264, 1415-21.
7. Ihle, J.N. (1995) *Nature* 377, 591-4.
8. Wen, Z. et al. (1995) *Cell* 82, 241-50.
9. Yokogami, K. et al. (2000) *Curr Biol* 10, 47-50.
10. Biethahn, S. et al. (1999) *Exp Hematol* 27, 885-94.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Applications Key****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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