

Store at  
-20C  
#52075**Phospho-Stat3 (Tyr705) (D3A7) XP<sup>®</sup> Rabbit mAb (HRP Conjugate)**
**Orders:** 877-616-CELL (2355)  
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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:
W	H M R Mk	Endogenous	79,86	Rabbit IgG	#P40763	6774

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**Phospho-Stat3 (Tyr705) (D3A7) XP<sup>®</sup> Rabbit mAb detects endogenous levels of Stat3 only when phosphorylated at tyrosine 705. This antibody does not cross-react with phospho-EGFR or the corresponding phospho-tyrosines of other Stat proteins.**Species predicted to react based on 100% sequence homology**

Hamster, Bovine, Pig, Horse

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr705 of mouse Stat3.

**Description**This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Stat3 (Tyr705) (D3A7) XP<sup>®</sup> Rabbit mAb #9145.**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 Stat3 $\alpha$  (86 kDa) and Stat3 $\beta$  (79 kDa) depend on cell type, ligand exposure, or cell maturation stage (10). It is notable that Stat3 $\beta$  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).

**Western Blot Buffer**IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween<sup>®</sup> 20 at 4°C with gentle shaking, overnight.**Applications Key****W:** Western Blotting**Cross-Reactivity Key****H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey**Trademarks and Patents**Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.  
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