

Stat3 (79D7) Rabbit mAb (Biotinylated)

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

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/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 140 mM NaCl, 3 mM KCl, 10 mM sodium phosphate (pH 7.4) dibasic, 2 mM potassium phosphate monobasic, 2 mg/mL BSA, and 50% glycerol. Store at -20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

Stat3 (79D7) Rabbit mAb (Biotinylated) recognizes endogenous levels of total Stat3 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a GST-Stat3 fusion protein corresponding to the carboxy-terminal sequence of mouse Stat3 protein.

Description

This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Stat3 (79D7) Rabbit mAb #4904.

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).

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

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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