

# Phospho-Smad2 (Ser465/467)/Smad3 (Ser423/425) (D27F4) Rabbit mAb (PE Conjugate)

✓ 100 µl  
(50 tests)

rev. 10/07/13



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**Applications**  
F  
Endogenous

**Species Cross-Reactivity\***  
H, M, R, Mk

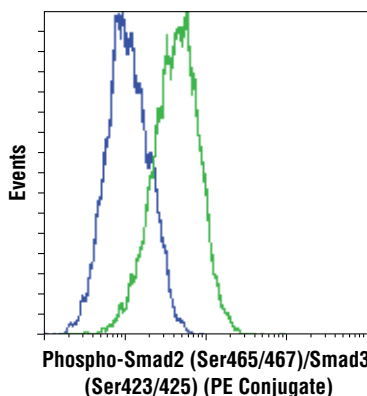
**Isotype**  
Rabbit IgG

**Description:** This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Smad2 (Ser465/467)/Smad3 (Ser423/425) (D27F4) Rabbit mAb #8828.

**Background:** Members of the Smad family of signal transduction molecules are components of a critical intracellular pathway that transmit TGF-β signals from the cell surface into the nucleus. Three distinct classes of Smads have been defined: the receptor-regulated Smads (R-Smads), which include Smad1, 2, 3, 5, and 8; the common-mediator Smad (co-Smad), Smad4; and the antagonistic or inhibitory Smads (I-Smads), Smad6 and 7 (1-5). Activated type I receptors associate with specific R-Smads and phosphorylate them on a conserved carboxy terminal SSXS motif. The phosphorylated R-Smad dissociates from the receptor and forms a heteromeric complex with the co-Smad (Smad4), allowing translocation of the complex to the nucleus. Once in the nucleus, Smads can target a variety of DNA binding proteins to regulate transcriptional responses (6-8).

**Specificity/Sensitivity:** Phospho-Smad2 (Ser465/467)/Smad3 (Ser423/425) (D27F4) Rabbit mAb (PE Conjugate) recognizes endogenous levels of Smad2 protein when phosphorylated at Ser465 and Ser467. This antibody also recognizes endogenous levels of Smad3 protein when phosphorylated at Ser422 only or at both Ser423 and Ser425.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser465/467 of human Smad2 protein.



Flow cytometric analysis of HT-1080 cells, treated with hTGF-β3 #8425 (green) or hTGF-β3 and SB431542 (blue), using Phospho-Smad2 (Ser465/467)/Smad3 (Ser423/425) (D27F4) Rabbit mAb (PE Conjugate).

**Entrez-Gene ID** #4087  
**UniProt Acc.** #Q15796

**Storage:** Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.

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

## Recommended Antibody Dilutions:

Flow Cytometry 1:50

**For product specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).**

**Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.**

## Background References:

- (1) Heldin, C.H. et al. (1997) *Nature* 390, 465-471.
- (2) Attisano, L. and Wrana, J.L. (1998) *Curr. Opin. Cell Biol.* 10, 188-194.
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- (5) Whitman, M. (1998) *Genes Dev.* 12, 2445-2462.
- (6) Wu, G. et al. (2000) *Science* 287, 92-97.
- (7) Attisano, L. and Wrana, J.L. (2002) *Science* 296, 1646-1647.
- (8) Moustakas, A. et al. (2001) *J. Cell Sci.* 114, 4359-4369.