Product Data Sheet: Phospho-Smad3-S423/S425

Cat. No:	MAB-94274
Conjugate:	Unconjugated
Size:	100 ul
Clone:	C25A9
Concentration:	1mg/ml
Host:	Rb
Isotype:	IgG
Reactivity:	Hu,Ms, Rt
Applications:	WB 1:1000,IHC(P) 1:50-100
Molecular Weight:	52 kDa
Purification:	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser423/425 of Smad3.
Background:	Members of the Smad family of signal transduction molecules are components of a critical intracellular pathway that transmits TGF-□□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). Following stimulation by TGF-□, Smad2 and Smad3 become phosphorylated at carboxyl terminal serine residues (Ser465 and 467 on Smad2; Ser423 and 425 on Smad3) by TGF-□□Receptor I. Phosphorylated Smad 2/3 can complex with Smad4 and translocate to the nucleus to regulate gene expression (9-11).Phospho-Smad3 (Ser423/425) (C25A9) Rabbit mAb detects endogenous levels of Smad3 when phosphorylated at Ser423/425. This antibody does not cross-react with other family members.
Form:	liquid
Buffer:	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage:	Store at -20℃. Avoid freeze / thaw cycles.

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. (3)Derynck, R. et al. (1998) Cell 95, 737–740. (4)Massague, J. (1998) Annu. Rev. Biochem. 67, 753–791. (5)Whitman, M. et al. (1998) Genes Dev. 12, 2445–2462. (6)Wrana, J. (2000) Science 23, 1–9. (7)Attisano, L. and Wrana, J. (2002) Science 296, 1646–1647. (8)Moustakas, A. et al. (2001) J. Cell Sci. 114, 4359–4369. (9)Abdollah, S. et al. (1997) J. Biol. Chem. 272, 27678–27685. (10)Souchelnytskyi, S. et al. (1997) J. Biol. Chem. 272, 28107–28115. (11)Liu, X. et al. (1997) Proc. Natl. Acad. Sci. USA 94, 10669–10674.

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