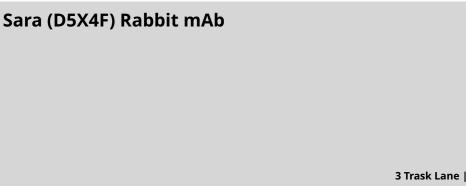
Revision 1

-20C

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Applications: W, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 190, 210	Source/Isotype: Rabbit IgG	UniProt ID: #O95405	Entrez-Gene Id: 9372		
Product Usage Information	e	Application Western Blotting Immunoprecipitation			Dilution 1:1000 1:100			
Storage		Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.						
Specificity/Se	nsitivity	Sara (D5X4F) Rabbit mAb recognizes endogenous levels of total Sara protein. This antibody also recognizes a non-specific band of unknown origin at 50 kDa.						
Source / Purif	ication	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val488 of human Sara protein.						
Background		The Smad anchor for receptor activation (SARA, ZFYVE9) protein is an FYVE domain-containing protein originally identified as a regulator of TGF- β signaling (1). FYVE domains are zinc finger-like domains that bind to phosphatidylinositol 3-phosphate and are responsible for endosomal trafficking (2). While the role of Sara in TGF- β signaling has been questioned (3,4), early research studies demonstrate that Sara enhances TGF- β signaling by binding and recruiting non-activated Smad2 and Smad3 to the TGF- β receptor complex (1). Upon Smad2 activation, Sara dissociates from the complex while phosphorylated Smad2/3 translocates to the nucleus to bind to the common Smad, Smad4. Sara can also function as an anchor for the protein phosphatase 1 (PP1c) catalytic subunit, which is involved in the Smad7-mediated dephosphorylation of TGF- β type I receptor (5,6). Additional research studies show that expression of Sara plays a critical role in maintenance of the epithelial cell phenotype and that expression is regulated during the epithelial-to-mesenchymal transition (EMT) and fibrosis (7,8).						
Background R	teferences	1. Tsukazaki, T. et al. (1998) <i>Cell</i> 95, 779-91. 2. Itoh, F. et al. (2002) <i>Genes Cells</i> 7, 321-31. 3. Bakkebø, M. et al. (2012) <i>FEBS Lett</i> 586, 3367-72. 4. Goto, D. et al. (2001) <i>Biochem Biophys Res Commun</i> 281, 1100-5. 5. Bennett, D. and Alphey, L. (2002) <i>Nat Genet</i> 31, 419-23. 6. Shi, W. et al. (2004) <i>J Cell Biol</i> 164, 291-300. 7. Runyan, C.E. et al. (2009) <i>J Biol Chem</i> 284, 25181-9. 8. Zhao, B.M. and Hoffmann, F.M. (2006) <i>Mol Biol Cell</i> 17, 3819-31.						
Species React	ivity	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 k	۲ey	W: Western Blotting IP: Immunoprecipitation						
Cross-Reactivi	ity Key	H: Human						
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