2187

RNF40 (D2R2O) Rabbit mAb



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Applications: W, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 130	Source/Isotype: Rabbit IgG	UniProt ID: #075150	Entrez-Gene Id: 9810	
Product Usage Information		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/Sens	itivity	RNF40 (D2R2O) Rabbit mAb recognizes endogenous levels of total RNF40 protein. This antibody does not cross-react with RNF20/BRE1A.				is antibody does	
Source / Purifica	ition	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp537 of human RNF40 protein.					
Background		In mammalian cells, the significance of histone H2B ubiquitination in chromatin epigenetics came from the identification of the budding yeast protein Bre1 (1,2). Together with the ubiquitin-conjugating enzyme Rad6, Bre1 serves as the E3 ligase in the monoubiquitination of the yeast histone H2B within transcribed regions of chromatin (1-3). Subsequently, the mammalian orthologs of yeast Bre1, RNF20 and RNF40, were identified (4,5). These two proteins form a tight heterodimer that acts as the major E3 ligase responsible for histone H2B monoubiquitination at Lys120 in mammalian cells, a modification linked to RNA Pol II-dependent transcription elongation in undamaged cells. Researchers have shown that DNA double-strand breaks (DSBs) are also capable of inducing monoubiquitination of H2B. This process depends upon the recruitment to DSB sites, as well as ATM-dependent phosphorylation of the RNF20-RNF40 heterodimer, thus highlighting a role for this E3 ligase in DSB repair pathways (6). Indeed, investigators have shown that loss of RNF20-RNF40 function promotes replication stress and chromosomal instability, which may constitute an early step in malignant transformation that precedes cell invasion (7).					
Background Ref	erences	1. Wood, A. et al. (2003) <i>Mol Cell</i> 11, 267-74. 2. Hwang, W.W. et al. (2003) <i>Mol Cell</i> 11, 261-6. 3. Kao, C.F. et al. (2004) <i>Genes Dev</i> 18, 184-95. 4. Kim, J. et al. (2005) <i>Mol Cell</i> 20, 759-70. 5. Zhu, B. et al. (2005) <i>Mol Cell</i> 20, 601-11. 6. Moyal, L. et al. (2011) <i>Mol Cell</i> 41, 529-42. 7. Chernikova, S.B. et al. (2012) <i>Cancer Res</i> , Epub ahead of print.					
Species Reactivi	ty	Species reactivity is det	ermined by testing	in at least one approve	d application (e.g.,	western blot).	
Western Blot Bu	ffer	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 IP	: Immunoprecipita	tion			
Cross-Reactivity	Кеу	H: Human					
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