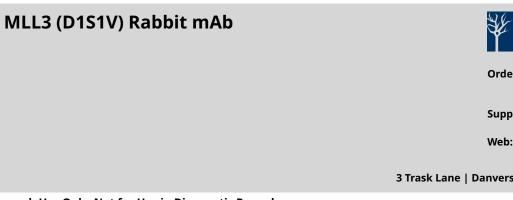
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Applications: W	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 540	Source/Isotype: Rabbit IgG	UniProt ID: #Q8NEZ4	Entrez-Gene Id: 58508		
Product Usage Information		Application Western Blotting			Dilution 1:1000			
Storage		Supplied in 10 mM sodium 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/Sensitivity		MLL3 (D1S1V) Rabbit mAb recognizes endogenous levels of total MLL3 protein.						
Source / Purification		Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala2110 of human MLL3 protein.						
Background	BackgroundThe Set1 histone methyltransferase protein was first identified in yeast as part of the Set1/COMP histone methyltransferase complex, which methylates histone H3 at Lys4 and functions as a transcriptional co-activator (1). While yeast contain only one known Set1 protein, mammals conta Set1-related proteins: SET1A, SET1B, MLL1, MLL2, MLL3, and MLL4, all of which assemble into COMPASS-like complexes and methylate histone H3 at Lys4 (2,3). These Set1-related proteins are found in distinct protein complexes, all of which share the common subunits WDR5, RBBP5, ASH2 CXXC1 and DPY30, which are required for proper complex assembly and modulation of histone methyltransferase activity (2-6). MLL1 and MLL2 complexes contain the additional protein subuni menin (6).							
		MLL3, also known as histone-lysine N-methyltransferase 2C (KMT2C), is a large 540 kDa protein that functions as part of the MLL3/COMPASS-like complex to activate gene expression by mediating mono- methylation of histone H3 lysine 4 at gene enhancers (7). Enhancer-specific H3 lysine 4 mono- methylation (H3K4me1) correlates with increased levels of chromatin interactions between gene enhancers and promoters, while loss of this modification results in a reduction of enhancer-promoter interactions (8). Furthermore, H3K4me1 facilitates recruitment of the Cohesin complex, which may function to promote the interactions between gene enhancers and promoters (8). MLL3 is found to be mutated or have altered expression in a number of different cancers (9).						
Background Re	eferences	 Miller, T. et al. (2001) Proc Natl Acad Sci U S A 98, 12902-7. Shilatifard, A. (2008) Curr Opin Cell Biol 20, 341-8. Tenney, K. and Shilatifard, A. (2005) J Cell Biochem 95, 429-36. Lee, J.H. and Skalnik, D.G. (2005) J Biol Chem 280, 41725-31. Lee, J.H. et al. (2007) J Biol Chem 282, 13419-28. Hughes, C.M. et al. (2004) Mol Cell 13, 587-97. Hu, D. et al. (2013) Mol Cell Biol 33, 4745-54. Yan, J. et al. (2018) Cell Res , . Sze, C.C. and Shilatifard, A. (2016) Cold Spring Harb Perspect Med 6, . 						
Species Reactiv	/ity	Species reactivity is de	etermined by testing	g in at least one approve	ed application (e.g.,	western blot).		
Western Blot B	uffer	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	ey	W: Western Blotting						
Cross-Reactivit	у Кеу	H: Human						
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