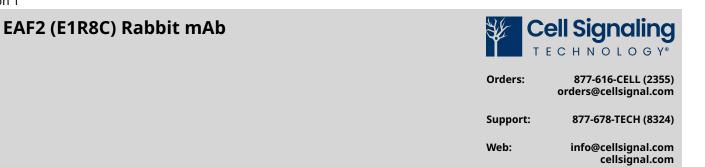
Store at -20C





3 Trask Lane | Danvers | Massachusetts | 01923 | USA

Applications: W, IP, ChIP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 42	Source/Isotype: Rabbit IgG	UniProt ID: #Q96CJ1	Entrez-Gene Id: 55840	
Product Usage Information		For optimal ChIP results, use 5 μl of antibody and 10 μg of chromatin (approximately 4 x 10 ⁶ cells) per IP. This antibody has been validated using SimpleChIP [®] Enzymatic Chromatin IP Kits.					
		Application Western Blotting Immunoprecipitation Chromatin IP			Dilution 1:1000 1:100 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/Sensitivity		EAF2 recognizes endogenous levels of total EAF2 protein.					
Source / Purification		Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human EAF2 protein.					
Background		The super elongation complex (SEC) plays a critical role in regulating RNA polymerase II (RNAPII) transcription elongation (1). The SEC is composed of AFF4, AFF1/AF4, MLLT3/AF9, and MLLT1/ENL proteins. The pathogenesis of mixed lineage leukemia is often associated with translocations of the SEC subunits joined to the histone H3 Lys4 methyltransferase mixed lineage leukemia (<i>MLL</i>) gene (1-4). The SEC has been found to contain RNAPII elongation factors eleven-nineteen lysine-rich leukemia (ELL), ELL2, and ELL3, along with the associated factors EAF1 and EAF2, which can increase the catalytic rate of RNAPII transcription <i>in vitro</i> , (1,2,5-7). The SEC positive transcription elongation factor b (P-TEFb) phosphorylates the carboxy-terminal domain within the largest subunit of RNAP II at Ser2 of the heptapeptide repeat. The SEC negative transcription elongation factors, DRB-induced stimulating factor (DSIF) and negative elongation factor (NELF), signal the transition from transcription initiation and pausing to productive transcription elongation (2,8-10). The chromosomal translocation of <i>MLL</i> with the members of the SEC leads to SEC recruitment to MLL regulated genes, such as the highly developmentally regulated <i>HOX</i> genes, implicating the misregulation and overexpression of these genes as underlying contributors to leukemogenesis (1,2,9,11).					
Background References		 Mohan, M. et al. (2010) Nat Rev Cancer 10, 721-8. Lin, C. et al. (2010) Mol Cell 37, 429-37. Drexler, H.G. et al. (2004) Leukemia 18, 227-32. Smith, E. et al. (2011) Genes Dev 25, 661-72. Shilatifard, A. et al. (1996) Science 271, 1873-6. Shilatifard, A. et al. (1997) Proc Natl Acad Sci U S A 94, 3639-43. Miller, T. et al. (2000) J Biol Chem 275, 32052-6. Lin, C. et al. (2011) Genes Dev 25, 1486-98. Yokoyama, A. et al. (2010) Cancer Cell 17, 198-212. Cho, S. et al. (2010) Cell Cycle 9, 1697-705. Shah, N. and Sukumar, S. (2010) Nat Rev Cancer 10, 361-71. Simone, F. et al. (2003) Blood 101, 2355-62. Xiao, W. et al. (2004) Cancer Res 63, 4698-704. Qiao, Z. et al. (2014) Prostate 74, 113-20. 					

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 Key	W: Western Blotting IP: Immunoprecipitation ChIP: Chromatin IP			
Cross-Reactivity Key	H: Human			
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	XP is a registered trademark of Cell Signaling Technology, Inc.			
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