

EAF2 (E1R8C) Rabbit mAb

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|-------------------------------------|-------------------------|-----------------------------------|------------------------|--------------------------------------|-------------------------------|---------------------------------|
| Applications: W, IP, ChIP | Reactivity: H | Sensitivity: Endogenous | MW (kDa): 42 | Source/Isotype: Rabbit IgG | UniProt ID: #Q96CJ1 | Entrez-Gene Id: 55840 |
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Product Usage Information

For optimal ChIP results, use 5 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP[®] Enzymatic Chromatin IP Kits.

| Application | Dilution |
|---------------------|-----------------|
| Western Blotting | 1:1000 |
| Immunoprecipitation | 1:100 |
| Chromatin IP | 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 (*MLL*) 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 *in vitro*, (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 *MLL* with the members of the SEC leads to SEC recruitment to *MLL* regulated genes, such as the highly developmentally regulated *HOX* genes, implicating the misregulation and overexpression of these genes as underlying contributors to leukemogenesis (1,2,9,11).

ELL associated factor 2 (EAF2) was identified as an interacting partner of eleven-nineteen lysine-rich leukemia (ELL) (12). EAF2 (U19) has also been identified as a protein that is down-regulated in prostate cancers and exhibits growth inhibitory and tumor suppressive activity (13,14).

Background References

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- Xiao, W. et al. (2003) *Cancer Res* 63, 4698-704.
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Species Reactivity

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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