

EAF2 Rabbit pAb

Catalog No.: A7119

Basic Information

Observed MW

35kDa

Calculated MW

14kDa/28kDa

Category

Primary antibody

Applications

WB,IF/ICC

Cross-Reactivity

Human, Mouse, Rat

Recommended Dilutions

WB	1:500 - 1:2000
IF/ICC	1:50 - 1:100

Contact

 | www.abclonal.com

Background

Actin is a key regulator of RNA polymerase (Pol) II-dependent transcription. Positive transcription elongation factor b (P-TEFb), a Cdk9/cyclin T1 heterodimer, has been reported to play a critical role in transcription elongation. However, the relationship between actin and P-TEFb is still not clear. In this study, actin was found to interact with Cdk9, a catalytic subunit of P-TEFb, in elongation complexes. Using immunofluorescence and immunoprecipitation assays, Cdk9 was found to bind to G-actin through the conserved Thr-186 in the T-loop. Overexpression and in vitro kinase assays showed that G-actin promotes P-TEFb-dependent phosphorylation of the Pol II C-terminal domain. An in vitro transcription experiment revealed that the interaction between G-actin and Cdk9 stimulated Pol II transcription elongation. ChIP and immobilized template assays indicated that actin recruited Cdk9 to a transcriptional template in vivo and in vitro. Using cytokine IL-6-inducible p21 gene expression system, we revealed that actin recruited Cdk9 to endogenous gene. Moreover, overexpression of actin and Cdk9 increased histone H3 acetylation and acetylated histone H3 binding to a transcriptional template through the interaction with histone acetyltransferase, p300. Taken together, our results suggested that actin participates in transcription elongation by recruiting Cdk9 for phosphorylation of the Pol II C-terminal domain, and the actin-Cdk9 interaction promotes chromatin remodeling.

Immunogen Information

Gene ID	Swiss Prot
55840	Q96CJ1

Immunogen

Recombinant fusion protein containing a sequence corresponding to amino acids 1-170 of human EAF2 (NP_060926.2).

Synonyms

EAF2;BM040;TRAITS;U19

Product Information

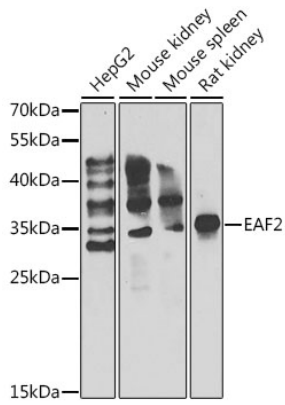
Source	Isotype	Purification
Rabbit	IgG	Affinity purification

Storage

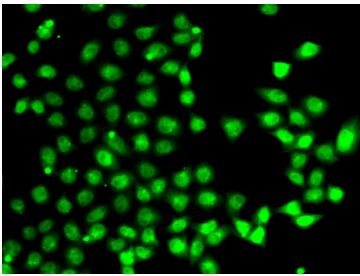
Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS with 0.02% sodium azide,50% glycerol,pH7.3.

Validation Data



Western blot analysis of extracts of various cell lines, using EAF2 antibody (A7119) at 1:1000 dilution.
Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25ug per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Enhanced Kit (RM00021).
Exposure time: 90s.



Immunofluorescence analysis of A-549 cells using EAF2 antibody (A7119).