EAF1 Polyclonal Antibody

catalog number: E-AB-91914

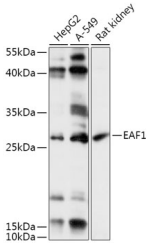
Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

Reactivity	Human;Rat
Immunogen	Recombinant fusion protein of human EAF1
Host	Rabbit
Isotype	IgG
Purification	Affinity purification
Buffer	Phosphate buffered solution, pH 7.4, containing 0.05% stabilizer and 50% glycerol.

Applications	Recommended Dilution
WB	1:500-1:2000

Data



Western blot analysis of extracts of various cell lines using EAF1 Polyclonal Antibody at 1:1000 dilution.

Observed-MW:29 kDa

Calculated-MW:17 kDa/29 kDa

Preparation & Storage

Storage	Store at -20°C Valid for 12 months. Avoid freeze / thaw cycles.
Shipping	The product is shipped with ice pack,upon receipt,store it immediately at the temperature recommended.

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 acetylized 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.