

anti- CDK9 antibody

Product Information

Catalog No.:	FNab01564
Size:	100µg
Form:	liquid
Purification:	Immunogen affinity purified
Purity:	≥95% as determined by SDS-PAGE
Host:	Rabbit
Clonality:	polyclonal
Clone ID:	None
IsoType:	IgG
Storage:	PBS with 0.02% sodium azide and 50% glycerol pH 7.3, -20°C for 12 months (Avoid repeated freeze / thaw cycles.)

Background

Protein kinase involved in the regulation of transcription. Member of the cyclin-dependent kinase pair(CDK9/cyclin-T) complex, also called positive transcription elongation factor b(P-TEFb), which facilitates the transition from abortive to productive elongation by phosphorylating the CTD(C-terminal domain) of the large subunit of RNA polymerase II(RNAP II) POLR2A, SUPT5H and RDBP. This complex is inactive when in the 7SK snRNP complex form. Phosphorylates EP300, MYOD1, RPB1/POLR2A and AR, and the negative elongation factors DSIF and NELF. Regulates cytokine inducible transcription networks by facilitating promoter recognition of target transcription factors(e.g. TNF-inducible RELA/p65 activation and IL-6-inducible STAT3 signaling). Promotes RNA synthesis in genetic programs for cell growth, differentiation and viral pathogenesis. P-TEFb is also involved in cotranscriptional histone modification, mRNA processing and mRNA export. Modulates a complex network of chromatin modifications including histone H2B monoubiquitination(H2Bub1), H3 lysine 4 trimethylation(H3K4me3) and H3K36me3; integrates phosphorylation during transcription with chromatin modifications to control co-transcriptional histone mRNA processing. The CDK9/cyclin-K complex has also a kinase activity towards CTD of RNAP II and can substitute for CDK9/cyclin-T P-TEFb in vitro. Replication stress response protein; the CDK9/cyclin-K complex is required for genome integrity maintenance, by promoting cell cycle recovery from replication arrest and limiting single-stranded DNA amount in response to replication stress, thus reducing the breakdown of stalled replication forks and avoiding DNA damage. In addition, probable function in DNA repair of isoform 2 via interaction with KU70/XRCC6. Promotes

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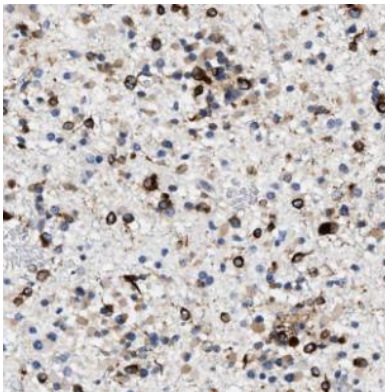
cardiac myocyte enlargement. RPB1/POLR2A phosphorylation on 'Ser-2' in CTD activates transcription. AR phosphorylation modulates AR transcription factor promoter selectivity and cell growth. DSIF and NELF phosphorylation promotes transcription by inhibiting their negative effect. The phosphorylation of MYOD1 enhances its transcriptional activity and thus promotes muscle differentiation.

Immunogen information

Immunogen: cyclin-dependent kinase 9
Synonyms: CDC2L4, TAK
Observed MW: 43 kDa
Uniprot ID : P50750

Application

Reactivity: Human, Mouse, Rat
Tested Application: ELISA, WB, IHC
Recommended dilution: WB: 1:500-1:2000; IHC: 1:20-1:200
Image:



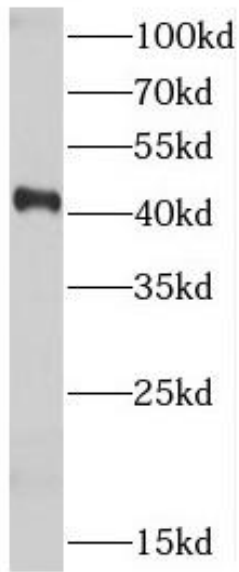
Immunohistochemistry of paraffin-embedded human gliomas using FNab01564(CDK9 antibody) at dilution of 1:50

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A431 cells were subjected to SDS PAGE followed by western blot with FNab01564(CDK9 antibody) at dilution of 1:1000