

Cdk9 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16162b

Specification

Cdk9 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	P50750
Other Accession	Q99J95 , Q641Z4 , Q5EAB2
Reactivity	Human, Mouse, Rat
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	251-278

Cdk9 Antibody (C-term) - Additional Information

Gene ID 1025

Other Names

Cyclin-dependent kinase 9, Cell division protein kinase 9, Cdk9

Target/Specificity

This Cdk9 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 251-278 amino acids from the C-terminal region of mouse Cdk9.

Dilution

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Cdk9 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Cdk9 Antibody (C-term) - Protein Information

Name CDK9 {ECO:0000303|PubMed:10903437, ECO:0000312|HGNC:HGNC:1780}

Function Protein kinase involved in the regulation of transcription (PubMed:[10574912](#),

PubMed:[10757782](#), PubMed:[11145967](#), PubMed:[11575923](#), PubMed:[11809800](#), PubMed:[11884399](#), PubMed:[14701750](#), PubMed:[16109376](#), PubMed:[16109377](#), PubMed:[20930849](#), PubMed:[28426094](#), PubMed:[29335245](#)). 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 (PubMed:[10574912](#), PubMed:[10757782](#), PubMed:[11145967](#), PubMed:[11575923](#), PubMed:[11809800](#), PubMed:[11884399](#), PubMed:[14701750](#), PubMed:[16109376](#), PubMed:[16109377](#), PubMed:[16427012](#), PubMed:[20930849](#), PubMed:[28426094](#), PubMed:[30134174](#)). This complex is inactive when in the 7SK snRNP complex form (PubMed:[10574912](#), PubMed:[10757782](#), PubMed:[11145967](#), PubMed:[11575923](#), PubMed:[11809800](#), PubMed:[11884399](#), PubMed:[14701750](#), PubMed:[16109376](#), PubMed:[16109377](#), PubMed:[20930849](#), PubMed:[28426094](#)). Phosphorylates EP300, MYOD1, RPB1/POLR2A and AR and the negative elongation factors DSIF and NELFE (PubMed:[10912001](#), PubMed:[11112772](#), PubMed:[12037670](#), PubMed:[16427012](#), PubMed:[20081228](#), PubMed:[20980437](#), PubMed:[21127351](#), PubMed:[9857195](#)). 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) (PubMed:[17956865](#), PubMed:[18362169](#)). Promotes RNA synthesis in genetic programs for cell growth, differentiation and viral pathogenesis (PubMed:[10393184](#), PubMed:[11112772](#)). P-TEFb is also involved in cotranscriptional histone modification, mRNA processing and mRNA export (PubMed:[15564463](#), PubMed:[19575011](#), PubMed:[19844166](#), PubMed:[28539972](#)). 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 (PubMed:[15564463](#), PubMed:[19575011](#), PubMed:[19844166](#)). Also catalyzes phosphorylation of histone H1.4 (H1-4) at Ser-187' (H1.4S187Ph), a modification associated with transcription activation (PubMed:[28539972](#)). 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 (PubMed:[21127351](#)). 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 (PubMed:[20493174](#)). In addition, probable function in DNA repair of isoform 2 via interaction with KU70/XRCC6 (PubMed:[20493174](#)). Promotes cardiac myocyte enlargement (PubMed:[20081228](#)). RPB1/POLR2A phosphorylation on 'Ser-2' in CTD activates transcription (PubMed:[21127351](#)). AR phosphorylation modulates AR transcription factor promoter selectivity and cell growth. DSIF and NELF phosphorylation promotes transcription by inhibiting their negative effect (PubMed:[10912001](#), PubMed:[11112772](#), PubMed:[9857195](#)). The phosphorylation of MYOD1 enhances its transcriptional activity and thus promotes muscle differentiation (PubMed:[12037670](#)). Catalyzes phosphorylation of KAT5, promoting KAT5 recruitment to chromatin and histone acetyltransferase activity (PubMed:[29335245](#)).

Cellular Location

Nucleus. Cytoplasm. Nucleus, PML body. Note=Accumulates on chromatin in response to replication stress Complexed with CCNT1 in nuclear speckles, but uncomplexed form in the cytoplasm. The translocation from nucleus to cytoplasm is XPO1/CRM1- dependent. Associates with PML body when acetylated

Tissue Location

Ubiquitous.

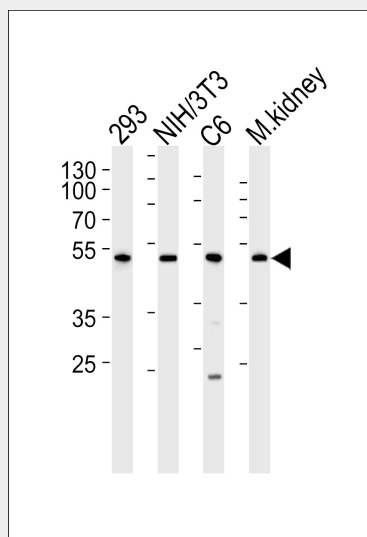
Cdk9 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Cdk9 Antibody (C-term) - Images



Western blot analysis of lysates from 293, mouse NIH/3T3, rat C6 cell line and mouse kidney tissue lysate (from left to right), using Cdk9 Antibody (C-term) (Cat. #AP16162b). AP16162b was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.

Cdk9 Antibody (C-term) - Background

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 production elongation by phosphorylating the CTD (C-terminal domain) of the large subunit of RNA polymerase II (RNAP II), SUPT5H and RDBP. The CDK9/cyclin-K complex has also a kinase activity toward CTD of RNAP II and can substitute for P-TEFb in vitro (By similarity).

Cdk9 Antibody (C-term) - References

- Yokoyama, S., et al. Dev. Cell 17(6):836-848(2009)
Alarcon, C., et al. Cell 139(4):757-769(2009)
Takaya, T., et al. Circ. J. 73(8):1492-1497(2009)
Kohoutek, J., et al. Mol. Cell. Biol. 29(12):3280-3285(2009)
Elagib, K.E., et al. Blood 112(13):4884-4894(2008)