

**CDK9 Rabbit mAb**  
Catalog # AP76436**Specification**

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**CDK9 Rabbit mAb - Product Information**

Application	<b>WB, IP</b>
Primary Accession	<a href="#">P50750</a>
Reactivity	<b>Human, Rat</b>
Host	<b>Rabbit</b>
Clonality	<b>Monoclonal Antibody</b>
Calculated MW	<b>42778</b>

**CDK9 Rabbit mAb - Additional Information****Gene ID** 1025**Other Names**  
CDK9**Dilution**  
WB~~1/500-1/1000  
IP~~1/20**Format**  
Liquid**CDK9 Rabbit mAb - Protein Information****Name** CDK9 {ECO:0000303|PubMed:10903437, ECO:0000312|HGNC:HGNC:1780}**Function**

Protein kinase involved in the regulation of transcription (PubMed:<a href="http://www.uniprot.org/citations/10574912" target="\_blank">10574912</a>, PubMed:<a href="http://www.uniprot.org/citations/10757782" target="\_blank">10757782</a>, PubMed:<a href="http://www.uniprot.org/citations/11145967" target="\_blank">11145967</a>, PubMed:<a href="http://www.uniprot.org/citations/11575923" target="\_blank">11575923</a>, PubMed:<a href="http://www.uniprot.org/citations/11809800" target="\_blank">11809800</a>, PubMed:<a href="http://www.uniprot.org/citations/11884399" target="\_blank">11884399</a>, PubMed:<a href="http://www.uniprot.org/citations/14701750" target="\_blank">14701750</a>, PubMed:<a href="http://www.uniprot.org/citations/16109376" target="\_blank">16109376</a>, PubMed:<a href="http://www.uniprot.org/citations/16109377" target="\_blank">16109377</a>, PubMed:<a href="http://www.uniprot.org/citations/20930849" target="\_blank">20930849</a>, PubMed:<a href="http://www.uniprot.org/citations/28426094" target="\_blank">28426094</a>, PubMed:<a href="http://www.uniprot.org/citations/29335245" target="\_blank">29335245</a>). 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:<a href="http://www.uniprot.org/citations/10574912" target="\_blank">10574912</a>)

target="\_blank">10574912</a>, PubMed:<a href="http://www.uniprot.org/citations/10757782" target="\_blank">10757782</a>, PubMed:<a href="http://www.uniprot.org/citations/11145967" target="\_blank">11145967</a>, PubMed:<a href="http://www.uniprot.org/citations/11575923" target="\_blank">11575923</a>, PubMed:<a href="http://www.uniprot.org/citations/11809800" target="\_blank">11809800</a>, PubMed:<a href="http://www.uniprot.org/citations/11884399" target="\_blank">11884399</a>, PubMed:<a href="http://www.uniprot.org/citations/14701750" target="\_blank">14701750</a>, PubMed:<a href="http://www.uniprot.org/citations/16109376" target="\_blank">16109376</a>, PubMed:<a href="http://www.uniprot.org/citations/16109377" target="\_blank">16109377</a>, PubMed:<a href="http://www.uniprot.org/citations/20930849" target="\_blank">20930849</a>, PubMed:<a href="http://www.uniprot.org/citations/28426094" target="\_blank">28426094</a>, PubMed:<a href="http://www.uniprot.org/citations/30134174" target="\_blank">30134174</a>). This complex is inactive when in the 7SK snRNP complex form (PubMed:<a href="http://www.uniprot.org/citations/10574912" target="\_blank">10574912</a>, PubMed:<a href="http://www.uniprot.org/citations/10757782" target="\_blank">10757782</a>, PubMed:<a href="http://www.uniprot.org/citations/11145967" target="\_blank">11145967</a>, PubMed:<a href="http://www.uniprot.org/citations/11575923" target="\_blank">11575923</a>, PubMed:<a href="http://www.uniprot.org/citations/11809800" target="\_blank">11809800</a>, PubMed:<a href="http://www.uniprot.org/citations/11884399" target="\_blank">11884399</a>, PubMed:<a href="http://www.uniprot.org/citations/14701750" target="\_blank">14701750</a>, PubMed:<a href="http://www.uniprot.org/citations/16109376" target="\_blank">16109376</a>, PubMed:<a href="http://www.uniprot.org/citations/16109377" target="\_blank">16109377</a>, PubMed:<a href="http://www.uniprot.org/citations/20930849" target="\_blank">20930849</a>, PubMed:<a href="http://www.uniprot.org/citations/28426094" target="\_blank">28426094</a>). Phosphorylates EP300, MYOD1, RPB1/POLR2A and AR and the negative elongation factors DSIF and NELFE (PubMed:<a href="http://www.uniprot.org/citations/10912001" target="\_blank">10912001</a>, PubMed:<a href="http://www.uniprot.org/citations/11112772" target="\_blank">11112772</a>, PubMed:<a href="http://www.uniprot.org/citations/12037670" target="\_blank">12037670</a>, PubMed:<a href="http://www.uniprot.org/citations/20081228" target="\_blank">20081228</a>, PubMed:<a href="http://www.uniprot.org/citations/20980437" target="\_blank">20980437</a>, PubMed:<a href="http://www.uniprot.org/citations/21127351" target="\_blank">21127351</a>, PubMed:<a href="http://www.uniprot.org/citations/9857195" target="\_blank">9857195</a>). 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:<a href="http://www.uniprot.org/citations/17956865" target="\_blank">17956865</a>, PubMed:<a href="http://www.uniprot.org/citations/18362169" target="\_blank">18362169</a>). Promotes RNA synthesis in genetic programs for cell growth, differentiation and viral pathogenesis (PubMed:<a href="http://www.uniprot.org/citations/10393184" target="\_blank">10393184</a>, PubMed:<a href="http://www.uniprot.org/citations/11112772" target="\_blank">11112772</a>). P-TEFb is also involved in cotranscriptional histone modification, mRNA processing and mRNA export (PubMed:<a href="http://www.uniprot.org/citations/15564463" target="\_blank">15564463</a>, PubMed:<a href="http://www.uniprot.org/citations/19575011" target="\_blank">19575011</a>, PubMed:<a href="http://www.uniprot.org/citations/19844166" target="\_blank">19844166</a>). 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:<a href="http://www.uniprot.org/citations/15564463" target="\_blank">15564463</a>, PubMed:<a href="http://www.uniprot.org/citations/19575011" target="\_blank">19575011</a>, PubMed:<a href="http://www.uniprot.org/citations/19844166" target="\_blank">19844166</a>). 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:<a href="http://www.uniprot.org/citations/21127351" target="\_blank">21127351</a>). 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:<a href="http://www.uniprot.org/citations/20493174" target="\_blank">20493174</a>). In addition,

probable function in DNA repair of isoform 2 via interaction with KU70/XRCC6 (PubMed:<a href="http://www.uniprot.org/citations/20493174" target="\_blank">20493174</a>). Promotes cardiac myocyte enlargement (PubMed:<a href="http://www.uniprot.org/citations/20081228" target="\_blank">20081228</a>). RPB1/POLR2A phosphorylation on 'Ser-2' in CTD activates transcription (PubMed:<a href="http://www.uniprot.org/citations/21127351" target="\_blank">21127351</a>). AR phosphorylation modulates AR transcription factor promoter selectivity and cell growth. DSIF and NELF phosphorylation promotes transcription by inhibiting their negative effect (PubMed:<a href="http://www.uniprot.org/citations/10912001" target="\_blank">10912001</a>, PubMed:<a href="http://www.uniprot.org/citations/11112772" target="\_blank">11112772</a>, PubMed:<a href="http://www.uniprot.org/citations/9857195" target="\_blank">9857195</a>). The phosphorylation of MYOD1 enhances its transcriptional activity and thus promotes muscle differentiation (PubMed:<a href="http://www.uniprot.org/citations/12037670" target="\_blank">12037670</a>). Catalyzes phosphorylation of KAT5, promoting KAT5 recruitment to chromatin and histone acetyltransferase activity (PubMed:<a href="http://www.uniprot.org/citations/29335245" target="\_blank">29335245</a>).

#### 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 Rabbit mAb - 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 Rabbit mAb - Images



