

**CDK7 Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP51071**

**Specification**

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**CDK7 Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | <b>WB, IHC-P, E</b>    |
| Primary Accession | <a href="#">P50613</a> |
| Reactivity        | <b>Human</b>           |
| Host              | <b>Rabbit</b>          |
| Clonality         | <b>Polyclonal</b>      |
| Calculated MW     | <b>40 KDa</b>          |

**CDK7 Antibody - Additional Information**

**Gene ID** 1022

**Other Names**

Cyclin-dependent kinase 7, 39 kDa protein kinase, p39 Mo15, CDK-activating kinase 1, Cell division protein kinase 7, Serine/threonine-protein kinase 1, TFIIH basal transcription factor complex kinase subunit, CDK7, CAK, CAK1, CDKN7, MO15, STK1

**Format**

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**CDK7 Antibody - Protein Information**

**Name** CDK7

**Synonyms** CAK, CAK1, CDKN7, MO15, STK1

**Function**

Serine/threonine kinase involved in cell cycle control and in RNA polymerase II-mediated RNA transcription. Cyclin-dependent kinases (CDKs) are activated by the binding to a cyclin and mediate the progression through the cell cycle. Each different complex controls a specific transition between 2 subsequent phases in the cell cycle. Required for both activation and complex formation of CDK1/cyclin-B during G2-M transition, and for activation of CDK2/cyclins during G1-S transition (but not complex formation). CDK7 is the catalytic subunit of the CDK-activating kinase (CAK) complex. Phosphorylates SPT5/SUPT5H, SF1/NR5A1, POLR2A, p53/TP53, CDK1, CDK2, CDK4, CDK6 and CDK11B/CDK11. CAK activates the cyclin-associated kinases CDK1, CDK2, CDK4 and CDK6 by threonine phosphorylation, thus regulating cell cycle progression. CAK complexed to the core-TFIIH basal transcription factor activates RNA polymerase II by serine phosphorylation of the repetitive C- terminal domain (CTD) of its large subunit (POLR2A), allowing its escape from the promoter and elongation of the transcripts (PubMed:<a href="http://www.uniprot.org/citations/9852112" target="\_blank">9852112</a>).

Phosphorylation of POLR2A in complex with DNA promotes transcription initiation by triggering dissociation from DNA. Its expression and activity are constant throughout the cell cycle. Upon DNA damage, triggers p53/TP53 activation by phosphorylation, but is inactivated in turn by p53/TP53; this feedback loop may lead to an arrest of the cell cycle and of the transcription, helping in cell recovery, or to apoptosis. Required for DNA-bound peptides-mediated transcription and cellular growth inhibition.

#### **Cellular Location**

Nucleus. Cytoplasm. Cytoplasm, perinuclear region. Note=Colocalizes with PRKCI in the cytoplasm and nucleus (PubMed:15695176). Translocates from the nucleus to cytoplasm and perinuclear region in response to DNA-bound peptides (PubMed:19071173).

#### **Tissue Location**

Ubiquitous.

### **CDK7 Antibody - 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](#)

### **CDK7 Antibody - Images**

#### **CDK7 Antibody - Background**

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### **CDK7 Antibody - References**

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Darbon J.-M.,et al.Oncogene 9:3127-3138(1994).  
Wu L.,et al.Oncogene 9:2089-2096(1994).

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