

**Anti-Cdk7 Antibody**  
Catalog # ABO11434**Specification****Anti-Cdk7 Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">Q03147</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Polyclonal</b>
Format	<b>Lyophilized</b>

**Description**

Rabbit IgG polyclonal antibody for Cyclin-dependent kinase 7(CDK7) detection. Tested with WB in Human;Rat;Mouse.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Cdk7 Antibody - Additional Information**

**Gene ID** 12572

**Other Names**

Cyclin-dependent kinase 7, 2.7.11.22, 2.7.11.23, 39 kDa protein kinase, P39 Mo15, CDK-activating kinase, CR4 protein kinase, CRK4, Cell division protein kinase 7, Protein-tyrosine kinase MPK-7, TFIIF basal transcription factor complex kinase subunit, Cdk7, Cak, Cdkn7, Crk4, Mo15, Mpk-7

**Calculated MW**

38968 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse<br>

**Subcellular Localization**

Nucleus. Cytoplasm . Cytoplasm, perinuclear region . Colocalizes with PRKCI in the cytoplasm and nucleus. Translocates from the nucleus to cytoplasm and perinuclear region in response to DNA-bound peptides (By similarity). .

**Protein Name**

Cyclin-dependent kinase 7

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg Na<sub>3</sub>N.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of mouse Cdk7(329-346aa RKRAEALQILPKKLIF), identical to the related rat sequence, and different from the related human sequence by two amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After r° Constitution, at 4°C for one month. It° Can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Sequence Similarities**

Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. CDC2/CDKX subfamily.

**Anti-Cdk7 Antibody - Protein Information**

**Name** Cdk7

**Synonyms** Cak, Cdkn7, Crk4, Mo15, Mpk-7

**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. 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 {ECO:0000250|UniProtKB:P50613}. Cytoplasm {ECO:0000250|UniProtKB:P50613}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:P50613}. Note=Colocalizes with PRKCI in the cytoplasm and nucleus. Translocates from the nucleus to cytoplasm and perinuclear region in response to DNA-bound peptides (By similarity) {ECO:0000250|UniProtKB:P50613}

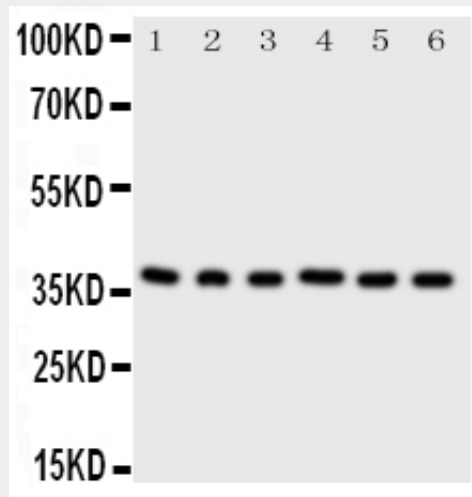
**Anti-Cdk7 Antibody - Protocols**

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](#)

### Anti-Cdk7 Antibody - Images



Anti-Cdk7 antibody, ABO11434, Western blotting  
All lanes: Anti Cdk7 (ABO11434) at 0.5ug/ml  
Lane 1: Rat Testis Tissue Lysate at 50ug  
Lane 2: Rat Ovary Tissue Lysate at 50ug  
Lane 3: HELA Whole Cell Lysate at 40ug  
Lane 4: MCF-7 Whole Cell Lysate at 40ug  
Lane 5: A549 Whole Cell Lysate at 40ug  
Lane 6: COLO320 Whole Cell Lysate at 40ug  
Predicted bind size: 39KD  
Observed bind size: 39KD

### Anti-Cdk7 Antibody - Background

Cyclin-dependent kinase 7, also known as cell division protein kinase 7, is an enzyme that in humans is encoded by the CDK7 gene. The protein encoded by this gene is a member of the cyclin-dependent protein kinase (CDK) family. The gene was assigned to human chromosome 5q13.2. Serine/threonine kinase involved in cell cycle control and in RNA polymerase II-mediated RNA transcription. CDK7 is the catalytic subunit of the CDK-activating kinase (CAK) complex. It is required for DNA-bound peptides-mediated transcription and cellular growth inhibition.