

**Anti-Cdk7 Picoband Antibody**  
Catalog # ABO12223**Specification****Anti-Cdk7 Picoband Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P50613</a>
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

**Description**

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

**Reconstitution**

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

**Anti-Cdk7 Picoband Antibody - Additional Information**

**Gene ID** 1022

**Other Names**

Cyclin-dependent kinase 7, 2.7.11.22, 2.7.11.23, 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

**Calculated MW**

39038 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human<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.

**Tissue Specificity**

Ubiquitous.

**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 Na<sub>3</sub>.

**Immunogen**

E.coli-derived human Cdk7 recombinant protein (Position: D31-F346). Human Cdk7 shares 94.9%

and 96.1% amino acid (aa) sequence identity with mouse and rat Cdk7, respectively.

#### **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 Picoband 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-TFIIF 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**

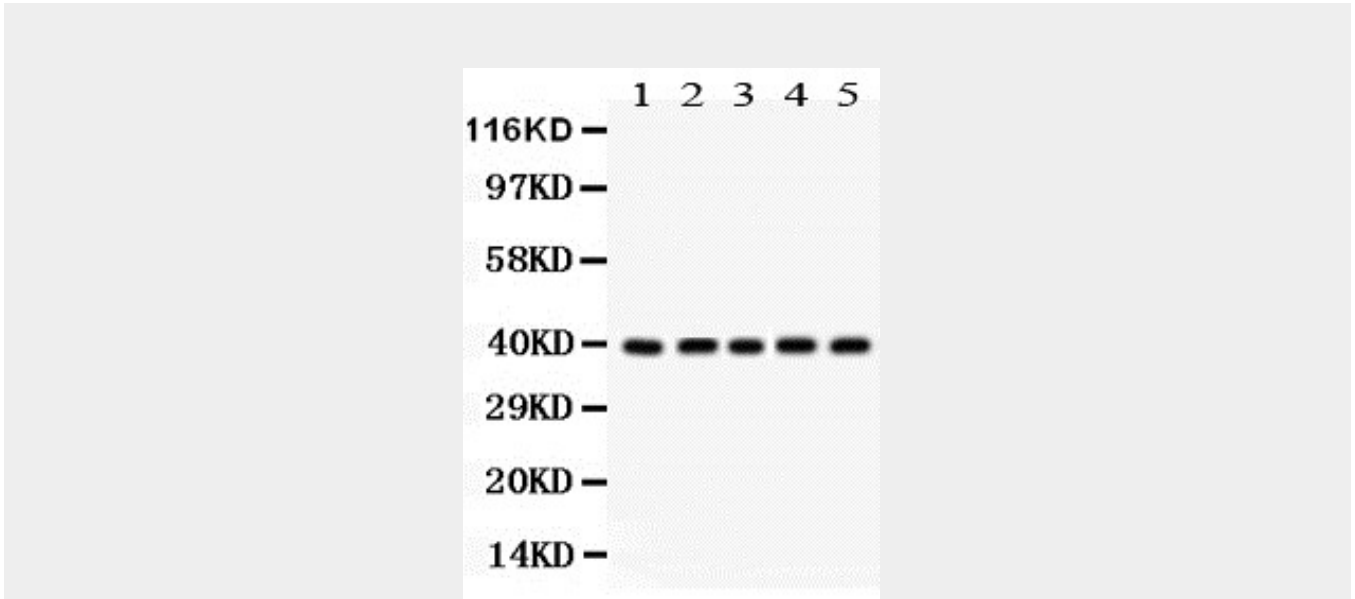
Ubiquitous.

### **Anti-Cdk7 Picoband 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 Picoband Antibody - Images



Anti- Cdk7 Picoband antibody, ABO12223, Western blotting All lanes: Anti Cdk7 (ABO12223) at 0.5ug/ml  
Lane 1: MCF-7 Whole Cell Lysate at 40ug  
Lane 2: HELA Whole Cell Lysate at 40ug  
Lane 3: A549 Whole Cell Lysate at 40ug  
Lane 4: HEPG2 Whole Cell Lysate at 40ug  
Lane 5: 293T Whole Cell Lysate at 40ug  
Predicted bind size: 39KD  
Observed bind size: 39KD

#### Anti-Cdk7 Picoband 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.