

Anti-Cdk7 Antibody

Catalog # ABO11434

Product Information

Application	WB
Primary Accession	Q03147
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
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.

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
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse
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). .
Source	Eukaryota
Protein Name	Cyclin-dependent kinase 7
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg Na ₃ N.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of mouse Cdk7(329-346aa RKRAEALQGLPKKLIF), 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.

Protein Information

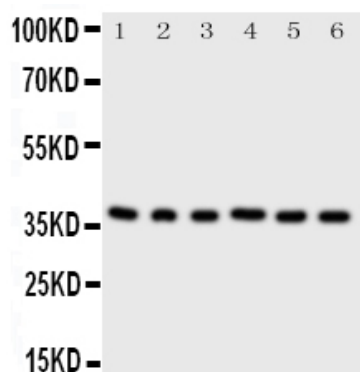
Name	Cdk7
Synonyms	Cak, Cdkn7, Crk4, Mo15, Mpk-7
Function	Serine/threonine kinase involved in cell cycle control and in RNA polymerase II-mediated RNA transcription (By similarity). As a cyclin-dependent kinase, CDK7 is activated by the binding to cyclin- H/CCNH and the CDK-activating kinase assembly factor MAT1 (By similarity). Catalytic subunit of the CDK-activating kinase (CAK) complex, a master regulator of CDK activity by catalyzing the activating threonine phosphorylation of CDKs (By similarity). CAK activates major mediators of cell cycle control, including CDK1, CDK2, CDK4 and CDK6, and plays a key role in regulating cell cycle progression (By similarity). CAK complexed to the core-TFIIH basal transcription factor activates RNA polymerase II by serine phosphorylation of the CTD of POLR2A, allowing its escape from the promoter and elongation of the transcripts (By similarity). Initiates transcription by RNA polymerase II by mediating phosphorylation of POLR2A at 'Ser-5' of the repetitive C-terminal domain (CTD) when POLR2A is in complex with DNA, promoting dissociation from DNA and initiation (By similarity). Phosphorylates SPT5/SUPT5H, SF1/NR5A1, POLR2A, p53/TP53, CDK1, CDK2, CDK4, CDK6 and CDK11B/CDK11 (By similarity). 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}

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.

Images

Anti-Cdk7 antibody, ABO11434, Western blottingAll lanes:
Anti Cdk7 (ABO11434) at 0.5ug/mlLane 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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.