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Anti-Cdk7 Antibody
Catalog # ABO11434

Specification

Anti-Cdk7 Antibody - 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.

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, TFIIH 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

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 Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of mouse Cdk7(329-346aa RKRAEALEQGILPKKLIF), 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. 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. 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 CTD of POLR2A, allowing its escape from the promoter and elongation of the transcripts. 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

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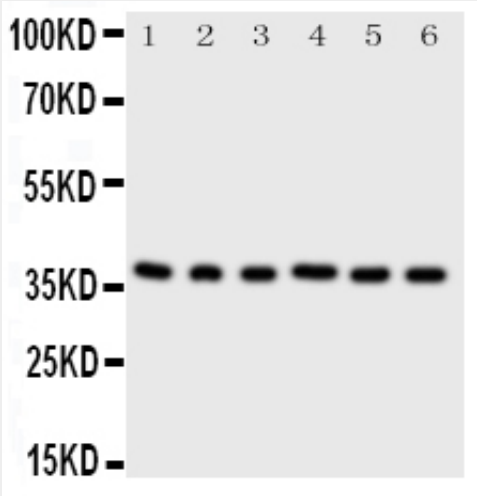
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Cdk7 Antibody - Images



Anti-Cdk7 antibody, ABO11434, Western blottingAll lanes: Anti Cdk7 (ABO11434) at 0.5ug/mlLane 1: Rat Testis Tissue Lysate at 50ugLane 2: Rat Ovary Tissue Lysate at 50ugLane 3: HELA Whole Cell Lysate at 40ugLane 4: MCF-7 Whole Cell Lysate at 40ugLane 5: A549 Whole Cell Lysate at 40ugLane 6: COLO320 Whole Cell Lysate at 40ugPredicted bind size: 39KDObserved 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.