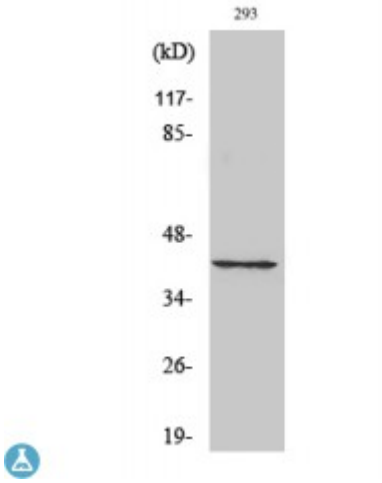
Anti-Cdk7 antibody



Description	Rabbit polyclonal to Cdk7.

Model	STJ92203
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human Cdk7
Immunogen Region	260-340 aa, C-terminal
Gene ID	1022
Gene Symbol	CDK7
Dilution range	WB 1:500-1:2000IHC 1:100-1:300ELISA 1:20000
Specificity	Cdk7 Polyclonal Antibody detects endogenous levels of Cdk7 protein.
Tissue Specificity	Ubiquitous.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	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
Molecular Weight	39 kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:1778OMIM:601955
Alternative 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
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 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.
Post-translational Modifications	Phosphorylation of Ser-164 during mitosis inactivates the enzyme. Phosphorylation of Thr-170 is required for activity. Phosphorylated at Ser-164 and Thr-170 by CDK2.