

Goat Anti-CDK7 (aa47-58) Antibody
Peptide-affinity purified goat antibody
Catalog # AF4132a**Specification**

Goat Anti-CDK7 (aa47-58) Antibody - Product Information

Application	WB, E
Primary Accession	P50613
Other Accession	NP_001790.1 , 1022 , 12572 (mouse) , 171150 (rat)
Reactivity	Human, Mouse, Rat, Dog, Bovine
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	39038

Goat Anti-CDK7 (aa47-58) 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

Dilution

WB~~1:1000

E~~N/A

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Immunogen

Peptide with sequence C-HRSEAKDGINRT, from the internal region of the protein sequence according to NP_001790.1. Please note the peptide is available for sale.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-CDK7 (aa47-58) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-CDK7 (aa47-58) 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 (PubMed:9852112, PubMed:19136461, PubMed:26257281, PubMed:28768201). 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 (PubMed:9372954, PubMed:9840937, PubMed:19136461, PubMed:26257281, PubMed:28768201). 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 (PubMed:19136461, PubMed:26257281, PubMed:28768201). 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 CTD of POLR2A, allowing its escape from the promoter and elongation of the transcripts (PubMed:9852112). 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.

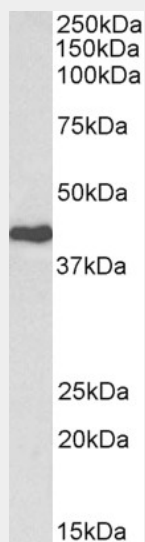
Goat Anti-CDK7 (aa47-58) Antibody - Protocols

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](#)

Goat Anti-CDK7 (aa47-58) Antibody - Images



AF4132a (0.3 µg/ml) staining of Jurkat lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-CDK7 (aa47-58) Antibody - References

Inhibition of transcription by the trimeric cyclin-dependent kinase 7 complex. Bochar DA, Pan ZQ, Knights R, Fisher RP, Shilatifard A, Shiekhattar R. The Journal of biological chemistry 1999 May 274 (19): 13162-6. PMID: 10224071