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CDK7 Antibody (clone E3E)
Mouse Monoclonal Antibody
Catalog # ALS15192

Specification

CDK7 Antibody (clone E3E) - Product Information

Application	**WB**
Primary Accession	P50613
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**39kDa KDa**

CDK7 Antibody (clone E3E) - 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

Reconstitution & Storage
Long term: -20°C; Short term: -20°C

Precautions
CDK7 Antibody (clone E3E) is for research use only and not for use in diagnostic or therapeutic procedures.

CDK7 Antibody (clone E3E) - 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-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 (PubMed:<a

href="http://www.uniprot.org/citations/9852112" target="_blank">9852112). 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.

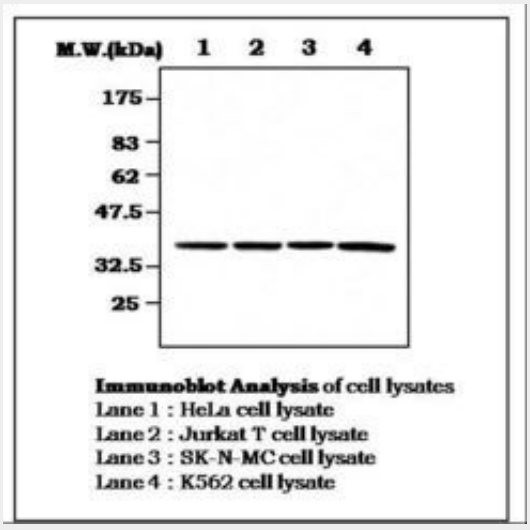
Volume
50 µl

CDK7 Antibody (clone E3E) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CDK7 Antibody (clone E3E) - Images



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CDK7 Antibody (clone E3E) - Background

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CDK7 Antibody (clone E3E) - References

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