

Product datasheet

Anti-Cdk7 antibody [EPR23695-115] ab256787

Recombinant RabMAb

9 Images

Overview

Product name	Anti-Cdk7 antibody [EPR23695-115]
Description	Rabbit monoclonal [EPR23695-115] to Cdk7
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), IHC-P, WB, IP Unsuitable for: ChIP or ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa, HEK-293, NIH/3T3, RAW 264.7, C6, HepG2, HCT 116 and MEF whole cell lysates; Mouse spleen tissue lysate; Rat spleen tissue lysate. IHC-P: Mouse testis and breast cancer tissue; Rat testis tissue. Flow Cyt (intra): HeLa and NIH/3T3 cells. IP: NIH/3T3 whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR23695-115

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab256787 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/50.
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/1000. Detects a band of approximately 39 kDa (predicted molecular weight: 39 kDa).
IP		1/30.

Application notes

Is unsuitable for ChIP or ICC/IF.

Target

Function

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 two subsequent phases in the cell cycle. CDK7 is the catalytic subunit of the CDK-activating kinase (CAK) complex, a serine-threonine kinase. CAK activates the cyclin-associated kinases CDK1, CDK2, CDK4 and CDK6 by threonine phosphorylation. CAK complexed to the core-TFIIH basal transcription factor activates RNA polymerase II by serine phosphorylation of the repetitive C-terminus domain (CTD) of its large subunit (POLR2A), allowing its escape from the promoter and elongation of the transcripts. Involved in cell cycle control and in RNA transcription by RNA polymerase II. Its expression and activity are constant throughout the cell cycle.

Tissue specificity

Ubiquitous.

Sequence similarities

Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. CDC2/CDKX subfamily.
Contains 1 protein kinase domain.

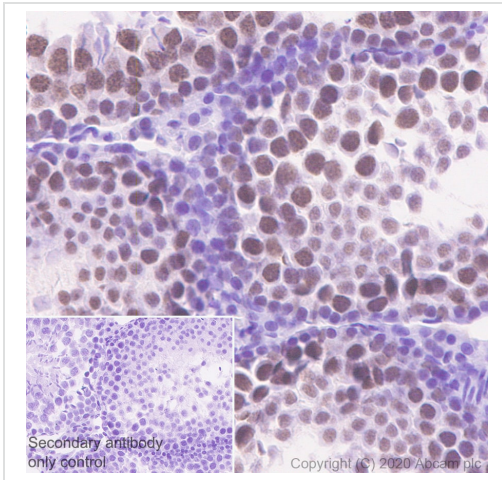
Post-translational modifications

Phosphorylation of Ser-164 during mitosis inactivates the enzyme.
Phosphorylation of Thr-170 is required for activity.

Cellular localization

Nucleus.

Images

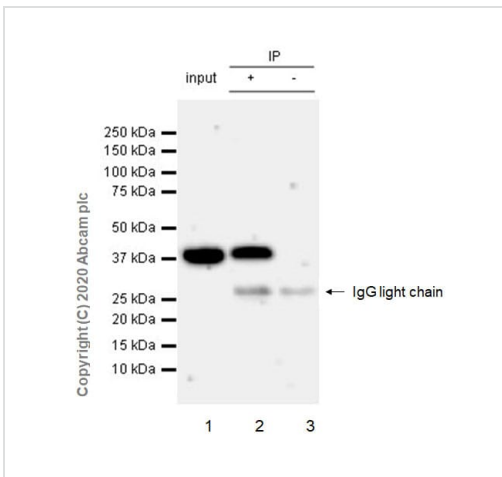


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cdk7 antibody [EPR23695-115] (ab256787)

Immunohistochemical analysis of paraffin-embedded Rat testis tissue labeling Cdk7 with ab256787 at 1/100 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Nuclear staining in rat testis (PMID: 11319144, PMID: 8521393). The section was incubated with ab256787 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND[®] RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunoprecipitation - Anti-Cdk7 antibody [EPR23695-115] (ab256787)

Cdk7 was immunoprecipitated from 0.35 mg NIH/3T3 (mouse embryonic fibroblast) whole cell lysate with ab256787 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab256787 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(**ab131366**) was used at 1/5000 dilution.

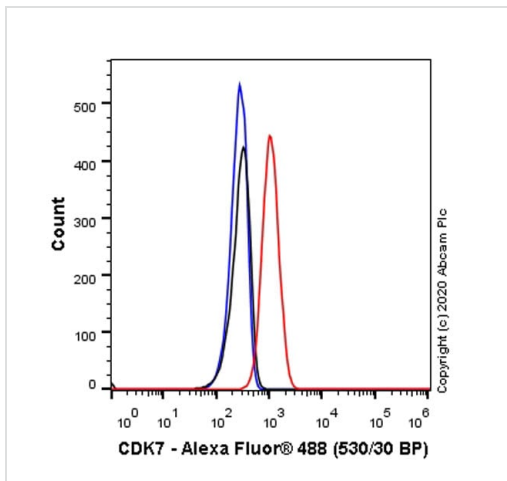
Lane 1: NIH/3T3 (mouse embryonic fibroblast) whole cell lysate 10 ug

Lane 2: ab256787 IP in NIH/3T3 whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab256787 in NIH/3T3 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDN/TBST.

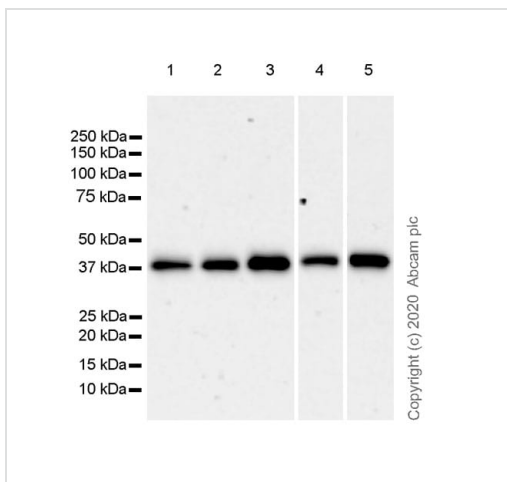
Exposure time: 3 minutes.



Flow Cytometry (Intracellular) - Anti-Cdk7 antibody [EPR23695-115] (ab256787)

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling Cdk7 with ab256787 at 1/50 dilution (1ug) (Red) compared with a Rabbit monoclonal IgG (**ab172730**) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.



Western blot - Anti-Cdk7 antibody [EPR23695-115] (ab256787)

All lanes : Anti-Cdk7 antibody [EPR23695-115] (ab256787) at 1/1000 dilution

Lane 1 : HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate

Lane 2 : HCT 116 (human colorectal carcinoma epithelial cell) whole cell lysate

Lane 3 : MEF (mouse embryonic fibroblast (immortalized)) whole cell lysate

Lane 4 : Mouse spleen tissue lysate

Lane 5 : Rat spleen tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

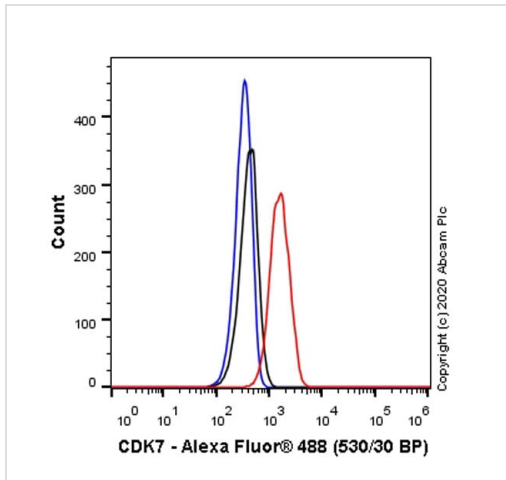
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) at 1/50000 dilution

Predicted band size: 39 kDa

Observed band size: 39 kDa

Blocking and diluting buffer and concentration: 5% NFDN/TBST.

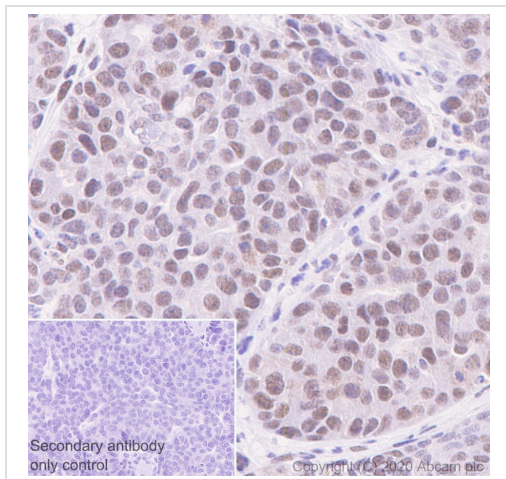
Exposure time: 92 seconds.



Flow Cytometry (Intracellular) - Anti-Cdk7 antibody
[EPR23695-115] (ab256787)

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized NIH/3T3 (Mouse embryonic fibroblast) cells labelling Cdk7 with ab256787 at 1/50 dilution (1ug) (Red) compared with a Rabbit monoclonal IgG (**ab172730**) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.

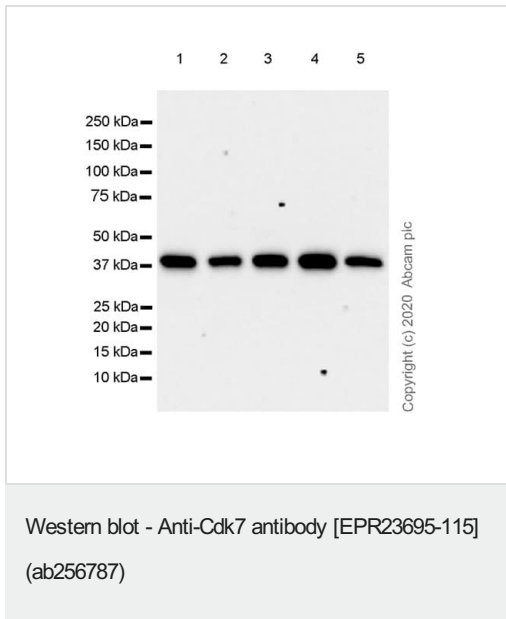


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cdk7 antibody
[EPR23695-115] (ab256787)

Immunohistochemical analysis of paraffin-embedded Mouse breast cancer tissue labeling Cdk7 with ab256787 at 1/100 followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Nuclear staining in mouse breast cancer (PMID: 27301701). The section was incubated with ab256787 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



All lanes : Anti-Cdk7 antibody [EPR23695-115] (ab256787) at 1/1000 dilution

Lane 1 : HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 2 : HEK-293 (human embryonic kidney epithelial cell) whole cell lysate

Lane 3 : NIH/3T3 (mouse embryonic fibroblast) whole cell lysate

Lane 4 : RAW 264.7 (mouse abelson murine leukemia virus-induced tumor macrophage) whole cell lysate

Lane 5 : C6 (rat glial tumor glial cell) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

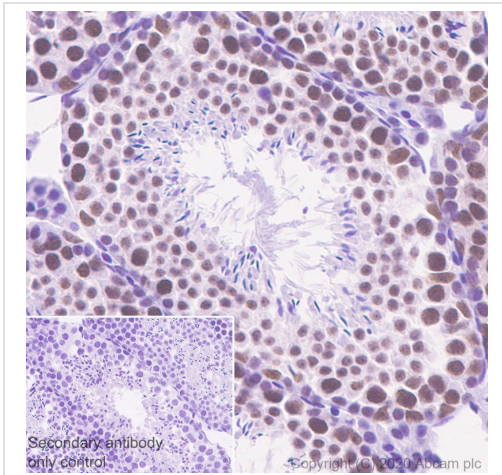
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated ([ab97051](#)) at 1/50000 dilution

Predicted band size: 39 kDa

Observed band size: 39 kDa

Blocking and diluting buffer and concentration: 5% NFDN/TBST.

Exposure time: 70 seconds.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cdk7 antibody [EPR23695-115] (ab256787)

Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labeling Cdk7 with ab256787 at 1/100 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Nuclear staining in mouse testis (PMID: 11319144, PMID: 8521393). The section was incubated with ab256787 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-Cdk7 antibody [EPR23695-115] (ab256787)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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