abcam

Product datasheet

Anti-Cyclin T1 antibody [EPR17982] ab184703

Recombinant RabMAb

1 Abreviews 3 References 10 Images

Overview

Product name	Anti-Cyclin T1 antibody [EPR17982]
Description	Rabbit monoclonal [EPR17982] to Cyclin T1
Host species	Rabbit
Specificity	Note that the antibody detects the target protein from human cell lysates but not tissue lysates.
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, ICC/IF, IP, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: K562, Jurkat, HeLa, HepG2, MCF7, C6, RAW 264.7, PC-12 and NIH/3T3 whole cell lysates; Mouse brain, kidney and spleen lysates; Rat brain and spleen lysates. IHC-P: Mouse liver and rat kidney tissues. ICC/IF: K562, NIH/3T3 and PC-12 cells. Flow Cyt (intra): NIH/3T3 cells. IP: PC-12 whole cell lysate.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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: 59% PBS, 0.05% BSA, 40% Glycerol (glycerin, glycerine)
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR17982
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab184703 in the following tested applications.

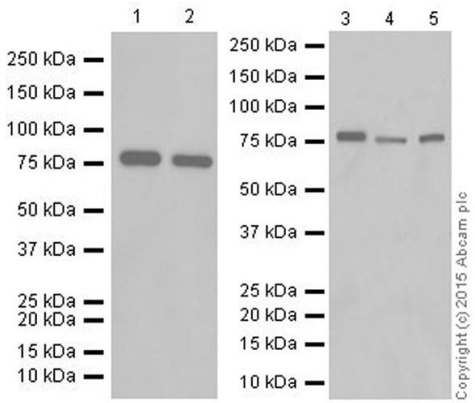
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/120.
WB	★★★☆☆ (1)	1/1000. Detects a band of approximately 81 kDa (predicted molecular weight: 81 kDa).
ICC/IF		1/500.
IP		1/40.
IHC-P		1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. The IHC application is recommended for mouse and rat only.

Target

Function	Regulatory subunit of the cyclin-dependent kinase pair (CDK9/cyclin-T1) complex, also called positive transcription elongation factor B (P-TEFb), which is proposed to facilitate the transition from abortive to productive elongation by phosphorylating the CTD (carboxy-terminal domain) of the large subunit of RNA polymerase II (RNA Pol II). In case of HIV or SIV infections, binds to the transactivation domain of the viral nuclear transcriptional activator, Tat, thereby increasing Tat's affinity for the transactivating response RNA element (TAR RNA). Serves as an essential cofactor for Tat, by promoting RNA Pol II activation, allowing transcription of viral genes.
Tissue specificity	Ubiquitously expressed.
Sequence similarities	Belongs to the cyclin family. Cyclin C subfamily.
Cellular localization	Nucleus.

Images



Western blot - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

All lanes : Anti-Cyclin T1 antibody [EPR17982] (ab184703) at 1/1000 dilution

Lane 1 : K562 (Human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate
Lane 2 : Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate
Lane 3 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 4 : HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate
Lane 5 : MCF7 (Human breast adenocarcinoma cell line) whole cell lysate

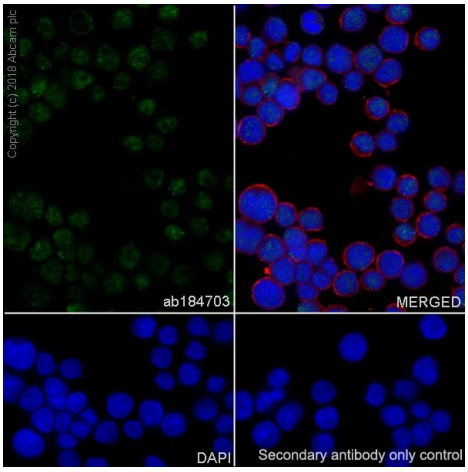
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 81 kDa
Observed band size: 81 kDa

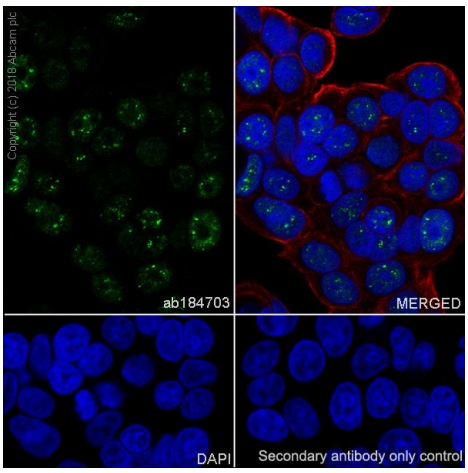
Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.



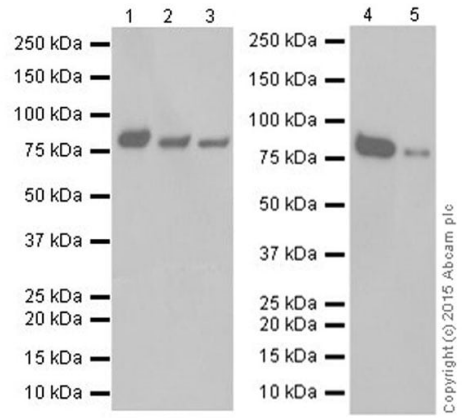
Immunocytochemistry/ Immunofluorescence - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

Ab184703 staining Cyclin T1 in Jurkat (human T cell leukemia T lymphocyte). Cells were fixed with 100% Methanol. Samples were incubated with primary antibody at 1/100 dilution (6.4µg/ml). An Alexa Fluor® 488 Goat anti-rabbit (**ab150077**) was used as the secondary antibody at 1/1000 dilution (2 µg/ml). Ab195888, anti-alpha Tubulin [DM1A] – Microtubule Marker (Alexa Fluor® 594) was used as counterstain antibody at 1/200 dilution (2.5 µg/ml). DAPI was used as a nuclear counterstain. Confocal image showing nuclear staining in Jurkat cell line.



Immunocytochemistry/ Immunofluorescence - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

Ab184703 staining Cyclin T1 in MCF7 (human breast adenocarcinoma epithelial cell). Cells were fixed with 100% Methanol. Samples were incubated with primary antibody at 1:100 dilution (6.4 µg/ml). An Alexa Fluor® 488 Goat anti-rabbit (**ab150077**) was used as the secondary antibody at 1/1000 dilution (2 µg/ml). Ab195888, anti-alpha Tubulin [DM1A] – Microtubule Marker (Alexa Fluor® 594) was used as counterstain antibody at 1/200 dilution (2.5 µg/ml). DAPI was used as a nuclear counterstain. Confocal image showing nuclear staining in MCF7 cell line.



Western blot - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

All lanes : Anti-Cyclin T1 antibody [EPR17982] (ab184703) at 1/1000 dilution

Lane 1 : Mouse brain lysate
Lane 2 : Mouse kidney lysate
Lane 3 : Mouse spleen lysate
Lane 4 : Rat brain lysate
Lane 5 : Rat spleen lysate

Lysates/proteins at 10 µg per lane.

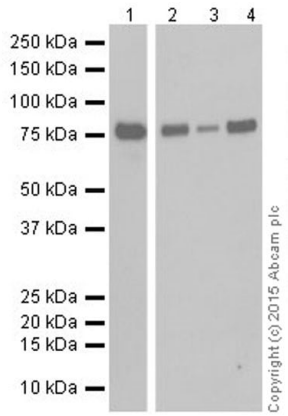
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 81 kDa
Observed band size: 81 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1,2 and 3: 15 seconds; Lane 4: 3 minutes.

The antibody did not detect the target protein from human tissues (WB or IHC) but the IHC application is recommended for mouse and rat. In addition the failure of human tissue WB might result from shortage of proper human tissue.



Western blot - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

All lanes : Anti-Cyclin T1 antibody [EPR17982] (ab184703) at 1/1000 dilution

Lane 1 : C6 (Rat glial tumor cell line) whole cell lysate
Lane 2 : RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate
Lane 3 : PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate
Lane 4 : NIH/3T3 (Mouse embryo fibroblast cell line) whole cell lysate

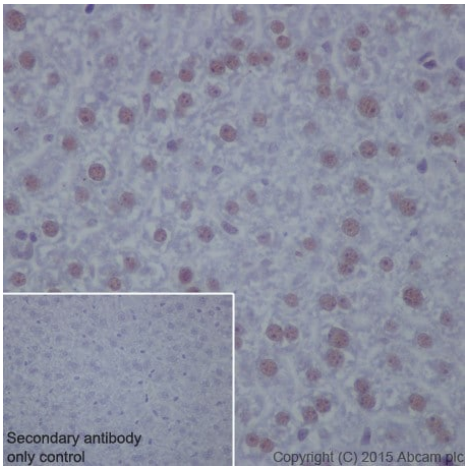
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 81 kDa
Observed band size: 81 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1: 3 minutes; Lane 2, 3 and 4: 15 seconds.

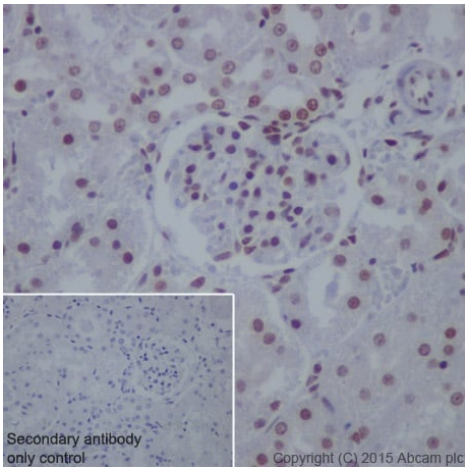


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Cyclin T1 with ab184703 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Nucleus staining on hepatocytes of mouse liver is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

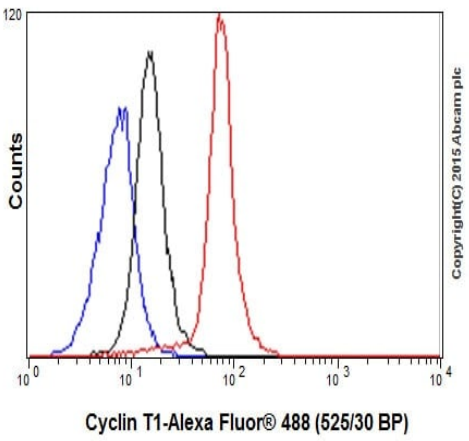


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling Cyclin T1 with ab184703 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Nucleus staining on rat kidney is observed. Counter stained with Hematoxylin.

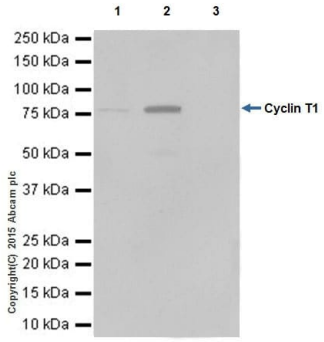
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



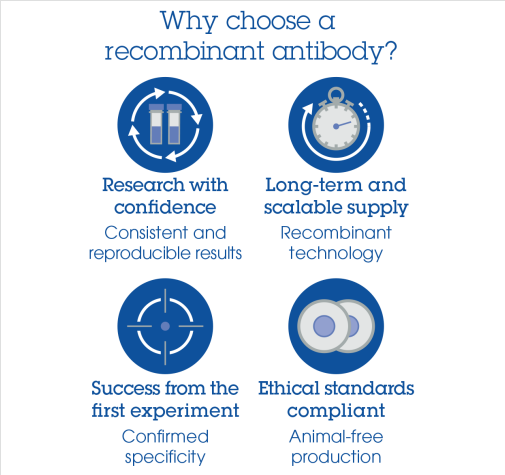
Flow Cytometry (Intracellular) - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed NIH/3T3 (Mouse embryonic fibroblast cell line) cells labeling Cyclin T1 with ab184703 at 1/120 dilution (red) compared with a Rabbit IgG,monoclonal [EPR17982] -Isotype Control (**ab172730**; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/500 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

Cyclin T1 was immunoprecipitated from 1mg of PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate with ab184703 at 1/40 dilution. Western blot was performed from the immunoprecipitate using ab184703 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.
Lane 1: PC-12 whole cell lysate 10µg (Input).
Lane 2: ab184703 IP in PC-12 whole cell lysate.
Lane 3: Rabbit IgG,monoclonal [EPR17982] - Isotpe Control (**ab172730**) instead of ab184703 in PC-12 whole cell lysate.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 30 seconds.



Anti-Cyclin T1 antibody [EPR17982] (ab184703)

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