abcam

ab184703

Anti-Cyclin T1 antibody [EPR17982]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR17982
Purification technique	Affinity purification Protein A
Specificity	Note that the antibody detects the target protein from human cell lysates but not tissue lysates.
Concentration	0.656 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Rat
Dilution info	1/40

Notes	-

Expected

Species	Mouse, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.

Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/120
Notes	-

Expected

Species	Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/250
Notes	The IHC application is recommended for mouse and rat only. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/250
Notes	The IHC application is recommended for mouse and rat only. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information CCNT1

Function	Regulatory subunit of the cyclin-dependent kinase pair (CDK9/cyclin-T1) complex, also called positive transcription elongation factor B (P-TEFb), which facilitates the transition from abortive to productive elongation by phosphorylating the CTD (C-terminal domain) of the large subunit of RNA polymerase II (RNA Pol II) (PubMed:16109376, PubMed:16109377, PubMed:30134174, PubMed:35393539). Required to activate the protein kinase activity of CDK9: acts by mediating formation of liquid-liquid phase separation (LLPS) that enhances binding of P-TEFb to the CTD of RNA Pol II (PubMed:29849146, PubMed:35393539). (Microbial infection) 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.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

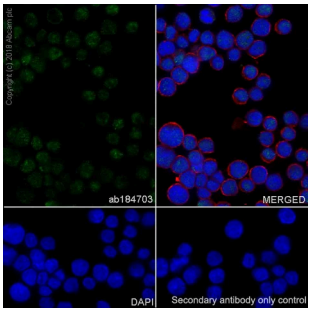
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

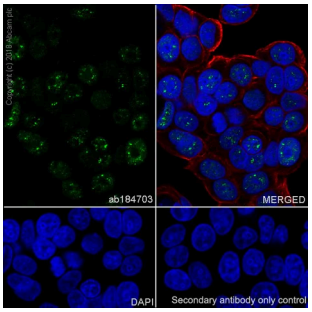
9 product images



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

Cyclin T1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cyclin T1 antibody

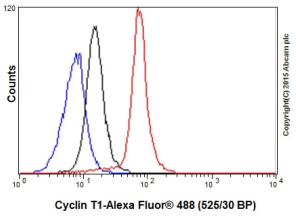
ab184703 staining Cyclin T1 in Jurkat (human T cell leukemia T lymphocyte). Cells were fixed with 100% Methanol. Samples were incubated with primary antibody at 1/100 dilution (6.4µg/ml). An Alexa Fluor® 488 Goat anti-rabbit (ab150077) was used as the secondary antibody at 1/1000 dilution (2 µg/ml). 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)

Cyclin T1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cyclin T1 antibody

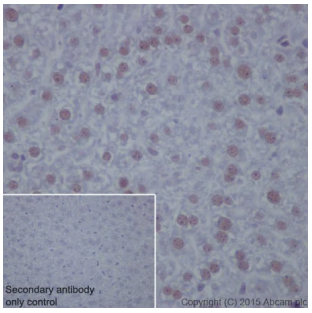
ab184703 staining Cyclin T1 in MCF7 (human breast adenocarcinoma epithelial cell). Cells were fixed with 100% Methanol. Samples were incubated with primary antibody at 1:100 dilution (6.4 µg/ml). An Alexa Fluor® 488 Goat anti-rabbit (ab150077) was used as the secondary antibody at 1/1000 dilution (2 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.



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

Cyclin T1 Flow Cytometry (Intracellular) staining using rabbit Anti-Cyclin T1 antibody

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.

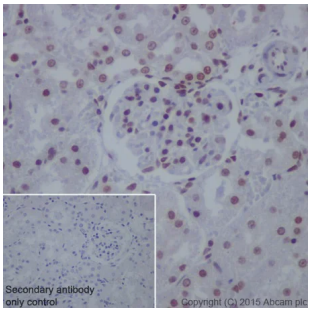


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

Cyclin T1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cyclin T1 antibody

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.

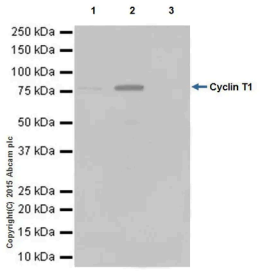


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

Cyclin T1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cyclin T1 antibody

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.

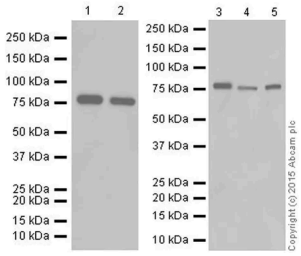
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



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.
All lanes:
Immunoprecipitation - Anti-Cyclin T1 antibody [EPR17982] (ab184703)

Predicted band size: 81 kDa



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

Cyclin T1 Western blot staining using rabbit Anti-Cyclin T1 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - 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 at 20 µg

Lane 2:
Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate at 20 µg

Lane 3:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 4:
HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate at 20 µg

Lane 5:
MCF7 (Human breast adenocarcinoma cell line) whole cell lysate at 20 µg

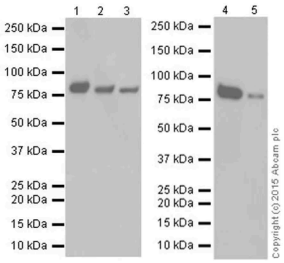
Secondary

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

Predicted band size: 81 kDa

Observed band size: 81 kDa

Exposure time: 3min



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

Cyclin T1 Western blot staining using rabbit Anti-Cyclin T1 antibody

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.

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

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse kidney lysate at 10 µg

Lane 3:
Mouse spleen lysate at 10 µg

Lane 4:
Rat brain lysate at 10 µg

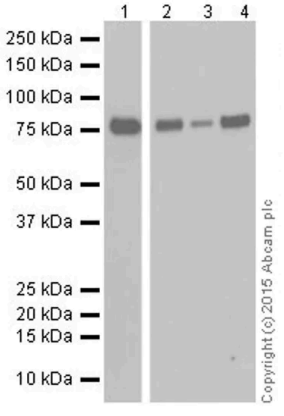
Lane 5:
Rat spleen lysate at 10 µg

Secondary

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

Predicted band size: 81 kDa

Observed band size: 81 kDa



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

Cyclin T1 Western blot staining using rabbit Anti-Cyclin T1 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1: 3 minutes; Lane 2, 3 and 4: 15 seconds.

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

Lane 1:
C6 (Rat glial tumor cell line) whole cell lysate at 10 µg

Lane 2:
RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 3:
PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate at 10 µg

Lane 4:
NIH/3T3 (Mouse embryo fibroblast cell line) whole cell lysate at 10 µg

Secondary

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

Predicted band size: 81 kDa

Observed band size: 81 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.