

Product datasheet

Anti-Thymidine Kinase 1/TK1 antibody [EPR3193] ab76495

KO VALIDATED Recombinant RabMAb

★★★★☆ 2 Abreviews 23 References 7 Images

Overview

Product name	Anti-Thymidine Kinase 1/TK1 antibody [EPR3193]
Description	Rabbit monoclonal [EPR3193] to Thymidine Kinase 1/TK1
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), WB, IP, IHC-P
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HEK-293T, Jurkat, HAP1, SW620, U-2 OS, and MOLT-4 cell lysates. Human tonsil tissue lysate; IP: MOLT-4 whole cell lysate; IHC-P: Human tonsil tissue; Flow Cyt (intra): HeLa cells.
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> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</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	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p>
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR3193
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab76495 in the following tested applications.

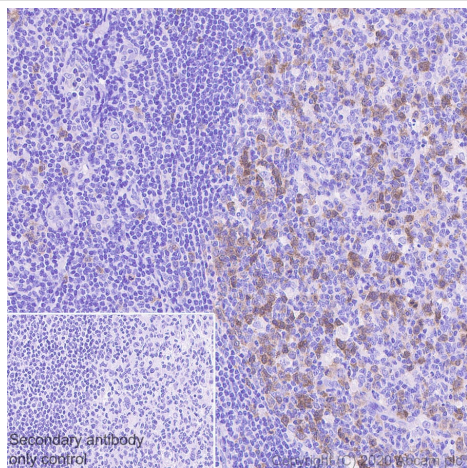
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/200. For unpurified use at 1/70 <u>ab172730</u> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/1000. Detects a band of approximately 25 kDa (predicted molecular weight: 25 kDa). For unpurified use at 1/5000 - 1/50000
IP		1/20.
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See <u>IHC antigen retrieval protocols</u> .

Target

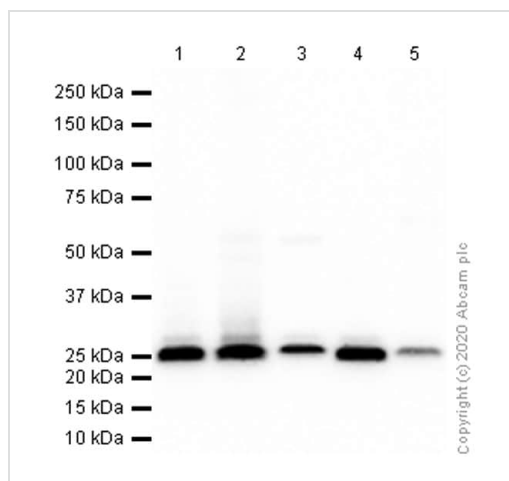
Sequence similarities	Belongs to the thymidine kinase family.
Post-translational modifications	Phosphorylated on Ser-13 in mitosis.
Cellular localization	Cytoplasm.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thymidine Kinase 1/TK1 antibody [EPR3193] (ab76495)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human tonsil tissue sections labeling Thymidine Kinase 1/TK1 with purified ab76495 at 1/200 dilution (0.85 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-Thymidine Kinase 1/TK1 antibody [EPR3193] (ab76495)

All lanes : Anti-Thymidine Kinase 1/TK1 antibody [EPR3193] (ab76495) at 1/1000 dilution (Purified)

Lane 1 : MOLT-4 (Human lymphoblastic leukemia T lymphoblast) whole cell lysate

Lane 2 : U-2 OS (Human bone osteosarcoma epithelial cell) whole cell lysate

Lane 3 : SW620 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate

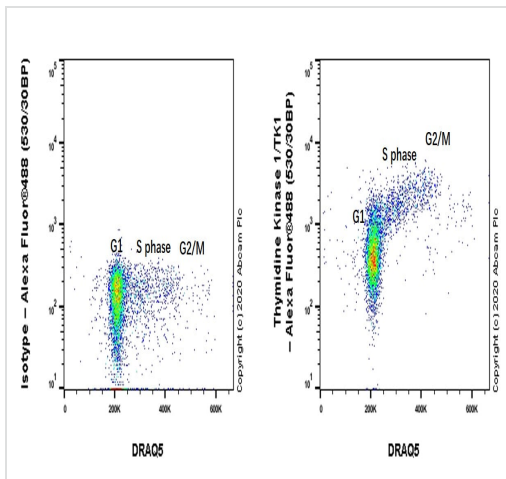
Lane 4 : Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate

Lane 5 : Human tonsil lysate

Secondary

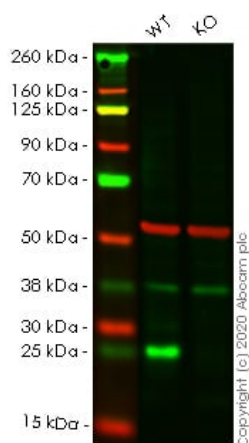
All lanes : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 25 kDa



Flow Cytometry (Intracellular) - Anti-Thymidine Kinase 1/TK1 antibody [EPR3193] (ab76495)

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Thymidine Kinase 1/TK1 with Purified ab76495 at 1/200 dilution (0.1 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488 [ab150077](#)) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Left). Unlabeled control - /.



Western blot - Anti-Thymidine Kinase 1/TK1 antibody [EPR3193] (ab76495)

All lanes : Anti-Thymidine Kinase 1/TK1 antibody [EPR3193] (ab76495) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T cell lysate

Lane 2 : TK1 knockout HEK-293T cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

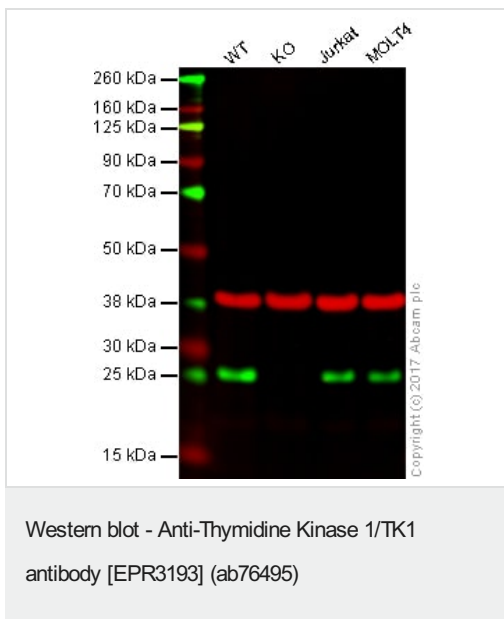
Predicted band size: 25 kDa

Observed band size: 25 kDa

Lanes 1-2: Merged signal (red and green). Green - ab76495 observed at 25 kDa. Red - Anti-alpha Tubulin antibody [DM1A] - Loading Control ([ab7291](#)) observed at 50 kDa.

ab76495 was shown to react with Thymidine Kinase 1/TK1 in wild-type HEK-293T cells in western blot. Loss of signal was observed when knockout cell line [ab266230](#) (knockout cell lysate [ab257745](#))

was used. Wild-type HEK-293T and TK1 knockout HEK-293T cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. ab76495 and Anti-alpha Tubulin antibody [DM1A] - Loading Control ([ab7291](#)) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Lane 1: Wild-type HAP1 whole cell lysate (20 µg)

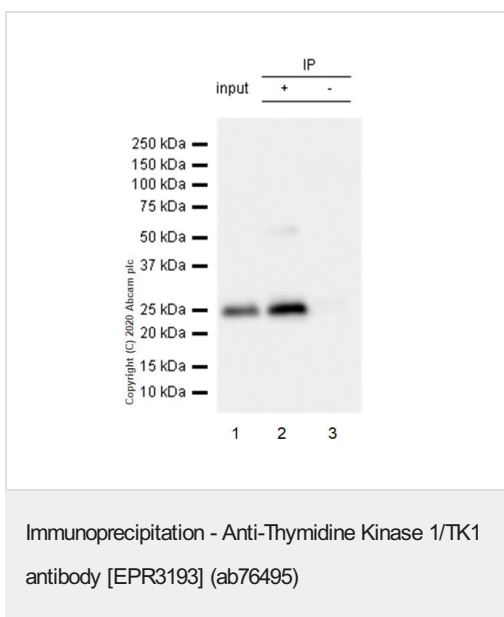
Lane 2: TK1 knockout HAP1 whole cell lysate (20 µg)

Lane 3: Jurkat whole cell lysate (20 µg)

Lane 4: MOLT4 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab76495 observed at 25 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

ab76495 was shown to specifically react with TK1 in wildtype HAP1 cells. No band was observed when TK1 knockout samples were examined. Wild-type and TK1 knockout samples were subjected to SDS-PAGE. Ab76495 and [ab8245](#) (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/5000 dilution and 1/10,000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed [ab216773](#) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed [ab216776](#) secondary antibodies at 1/20,000 dilution for 1 hour at room temperature before imaging.



Purified ab76495 at 1/20 dilution (0.8µg) immunoprecipitating Thymidine Kinase 1/TK1 in MOLT-4 whole cell lysate.

Lane 1 (input): MOLT-4 (Human lymphoblastic leukemia T lymphoblast)

Lane 2 (+): ab76495 + MOLT-4 whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG ([ab172730](#)) instead of ab76495 in MOLT-4 whole cell lysate.

VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) (1/1000 dilution) was used for Western blotting.

Blocking Buffer and concentration: 5% NFDm/TBST.

Diluting buffer and concentration: 5% NFDm/TBST.

Observed band size: 24 kDa

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Thymidine Kinase 1/TK1 antibody [EPR3193]
(ab76495)

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

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