

## Product datasheet

# Anti-Thymidylate Synthase antibody [EPR4545] - BSA and Azide free ab232021

Recombinant RabMAb

6 Images

### Overview

<b>Product name</b>	Anti-Thymidylate Synthase antibody [EPR4545] - BSA and Azide free
<b>Description</b>	Rabbit monoclonal [EPR4545] to Thymidylate Synthase - BSA and Azide free
<b>Host species</b>	Rabbit
<b>Specificity</b>	The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, WB, IP, Flow Cyt, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide within Human Thymidylate Synthase aa 300 to the C-terminus (C terminal). The exact sequence is proprietary. Database link: <a href="#">P04818</a>
<b>Positive control</b>	IHC-P: Human colon carcinoma tissue.
<b>General notes</b>	Ab232021 is the carrier-free version of <a href="#">ab108995</a> . This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes.

Our [carrier-free formats](#) are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency.

Use our [conjugation kits](#) for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

ab232021 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm.

*Maxpar® is a trademark of Fluidigm Canada Inc.*

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](#).

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

## Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Do Not Freeze.
<b>Storage buffer</b>	pH: 7.2 Constituent: PBS
<b>Carrier free</b>	Yes
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR4545
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab232021** in the following tested applications.

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

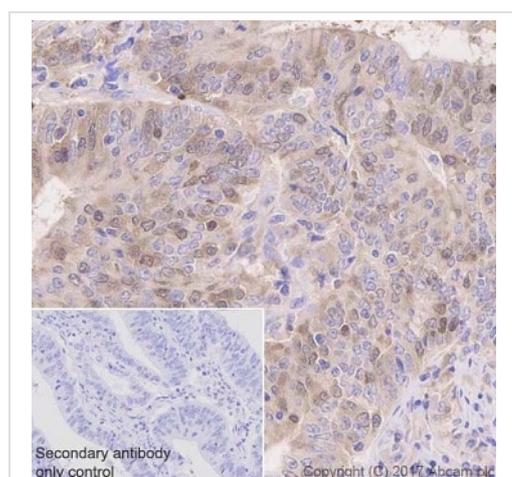
Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. Heat up to 98°C, below boiling, and then let cool for 10-20 minutes.  The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 36 kDa.
IP		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.

## Target

<b>Function</b>	Contributes to the de novo mitochondrial thymidylate biosynthesis pathway.
<b>Pathway</b>	Pyrimidine metabolism; dTTP biosynthesis.
<b>Sequence similarities</b>	Belongs to the thymidylate synthase family.
<b>Cellular localization</b>	Nucleus. Cytoplasm. Mitochondrion. Mitochondrion matrix. Mitochondrion inner membrane.

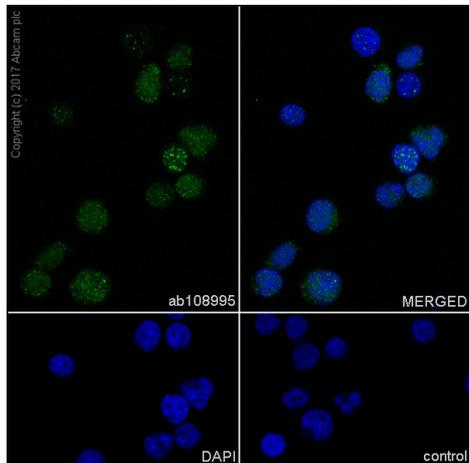
## Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon carcinoma tissue sections labeling Thymidylate Synthase with purified [ab108995](#) at 1:100 dilution. Heat mediated antigen retrieval was performed using [ab93684](#) (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab108995](#)).

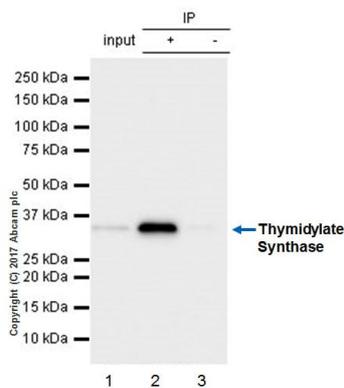
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thymidylate Synthase antibody [EPR4545] - BSA and Azide free (ab232021)



Immunocytochemistry/ Immunofluorescence - Anti-Thymidylate Synthase antibody [EPR4545] - BSA and Azide free (ab232021)

Immunocytochemistry/ Immunofluorescence analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling Thymidylate Synthase with Purified [ab108995](#) at 1:100 dilution. Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100 [ab150077](#) Goat anti rabbit IgG(Alexa Fluor® 488) was used as the secondary antibody at 1:1000 dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab108995](#)).



Immunoprecipitation - Anti-Thymidylate Synthase antibody [EPR4545] - BSA and Azide free (ab232021)

[ab108995](#) (purified) at 1:30 dilution (2µg) immunoprecipitating Thymidylate Synthase in Jurkat whole cell lysate.

**Lane 1 (input):** Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate, 10µg

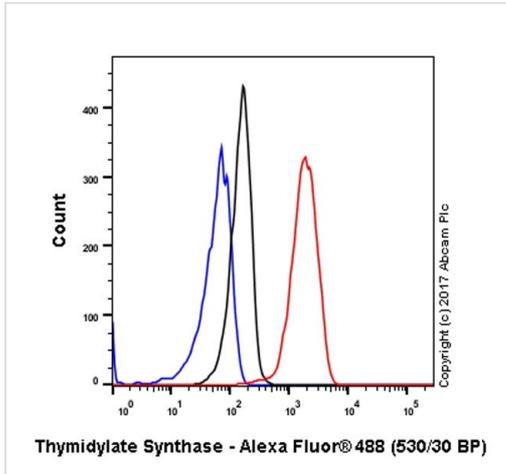
**Lane 2 (+):** [ab108995](#) & Jurkat whole cell lysate

**Lane 3 (-):** Rabbit monoclonal IgG ([ab172730](#)) instead of [ab108995](#) in Jurkat whole cell lysate

For western blotting, VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) was used for detection at 1:1000 dilution.

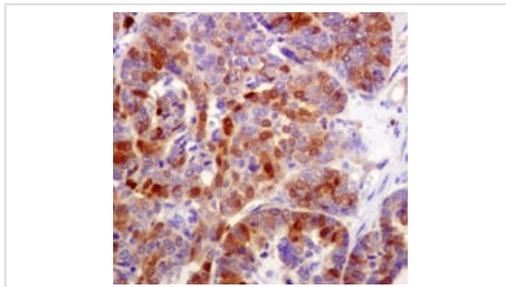
Blocking and diluting buffer: 5% NFDm/TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab108995](#)).



Flow Cytometry - Anti-Thymidylate Synthase antibody [EPR4545] - BSA and Azide free (ab232021)

Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Thymidylate Synthase with purified [ab108995](#) at 1:50 dilution (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1:2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab108995](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thymidylate Synthase antibody [EPR4545] - BSA and Azide free (ab232021)

Unpurified [ab108995](#) at 1/50 dilution, staining Thymidylate Synthase in Human ovary carcinoma Immunohistochemistry, Paraffin-embedded tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab108995](#)).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

### 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-Thymidylate Synthase antibody [EPR4545] -  
BSA and Azide free (ab232021)

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

### Our Abpromise to you: Quality guaranteed and expert technical support

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- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

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