

# Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade ab220788

Recombinant RabMAb

[4 References](#) [14 Images](#)

## Overview

<b>Product name</b>	Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade
<b>Description</b>	Rabbit monoclonal [EPR21954] to TATA binding protein TBP - ChIP Grade
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> ChIP-sequencing, Flow Cyt (Intra), ChIP, ChIC/CUT&RUN-seq, ICC/IF, WB, IHC-P, IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: HeLa, HEK-293, HCT 116, MCF7, NIH/3T3 and C2C12 whole cell lysates; mouse and rat testis lysates. IP: HeLa whole cell lysate. IHC-P: Human testis and bladder cancer tissue; Mouse and rat testis tissues. ICC/IF: HeLa and HCT 116 cells. Flow Cyt (intra): HeLa cells. ChIP: Chromatin prepared from HeLa cells. ChIP-seq: Chromatin prepared from HeLa cells. ChIC/CUT&RUN-Seq: HeLa cells.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

## Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p>

<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR21954
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab220788 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
<b>ChIP-sequencing</b>		Use 4 µg for 30 µg of chromatin.
<b>Flow Cyt (Intra)</b>		1/500.
<b>ChIP</b>		Use 5 µg for 25 µg of chromatin.
<b>ChIC/CUT&amp;RUN-seq</b>		Use at an assay dependent concentration. 3µg
<b>ICC/IF</b>		1/500.
<b>WB</b>		1/1000. Detects a band of approximately 45, 35 kDa (predicted molecular weight: 38 kDa).
<b>IHC-P</b>		1/4000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
<b>IP</b>		1/30.

## Target

<b>Function</b>	General transcription factor that functions at the core of the DNA-binding multiprotein factor TFIID. Binding of TFIID to the TATA box is the initial transcriptional step of the pre-initiation complex (PIC), playing a role in the activation of eukaryotic genes transcribed by RNA polymerase II. Component of the transcription factor SL1/TIF-IB complex, which is involved in the assembly of the PIC (preinitiation complex) during RNA polymerase I-dependent transcription. The rate of PIC formation probably is primarily dependent on the rate of association of SL1 with the rDNA promoter. SL1 is involved in stabilization of nucleolar transcription factor 1/UBTF on rDNA.
<b>Tissue specificity</b>	Widely expressed, with levels highest in the testis and ovary.
<b>Involvement in disease</b>	Defects in TBP are the cause of spinocerebellar ataxia type 17 (SCA17) [MIM:607136]. Spinocerebellar ataxia is a clinically and genetically heterogeneous group of cerebellar disorders. Patients show progressive incoordination of gait and often poor coordination of hands, speech and eye movements, due to degeneration of the cerebellum with variable involvement of the brainstem and spinal cord. SCA17 is an autosomal dominant cerebellar ataxia (ADCA) characterized by widespread cerebral and cerebellar atrophy, dementia and extrapyramidal signs. The molecular defect in SCA17 is the expansion of a CAG repeat in the coding region of TBP. Longer expansions result in earlier onset and more severe clinical manifestations of the

disease.

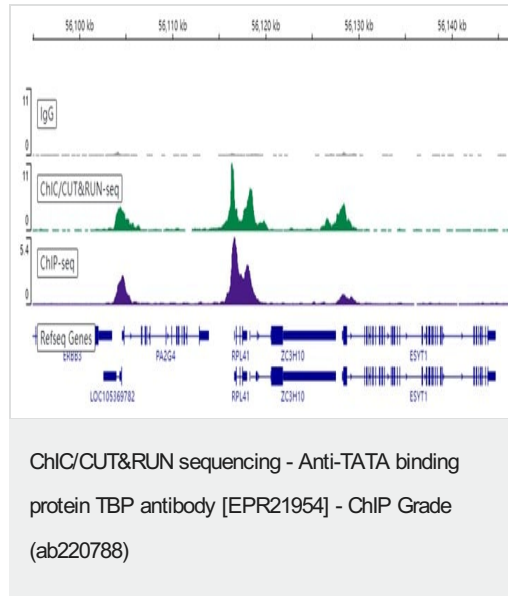
## Sequence similarities

Belongs to the TBP family.

## Cellular localization

Nucleus.

## Images

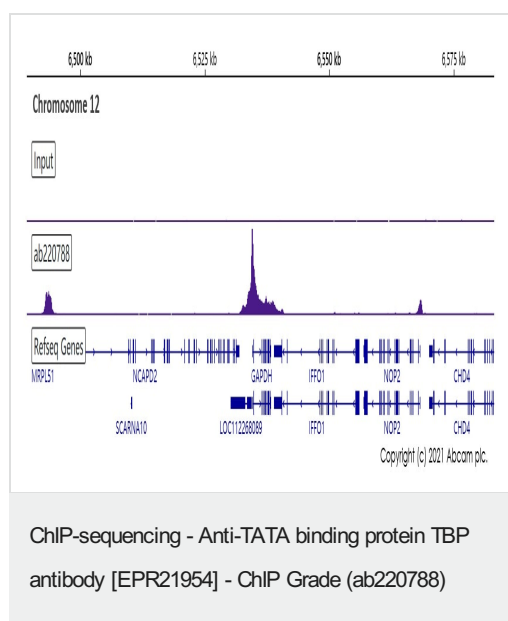


ChIC/CUT&RUN was performed using a pAG-MNase at a final concentration of 700 ng/mL,  $3 \times 10^5$  HeLa (Human cervix adenocarcinoma epithelial cell line) cells and  $3 \mu\text{g}$  of ab220788 [EPR21954]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control **ab172730** is also shown.

The ChIP data was conducted on chromatin prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with  $30 \mu\text{g}$  of chromatin and  $4 \mu\text{g}$  of ab220788 with ChIP-Kit Transcription Factors ChIP-Seq (**ab270813**). ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 30 million reads.

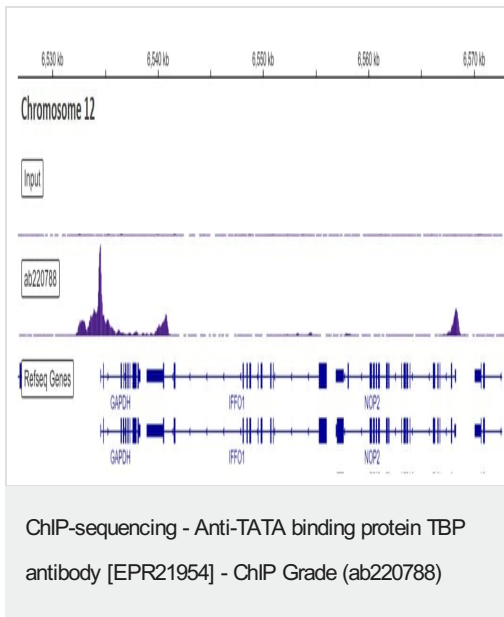
Additional screenshots of mapped reads can be downloaded [here](#).

The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



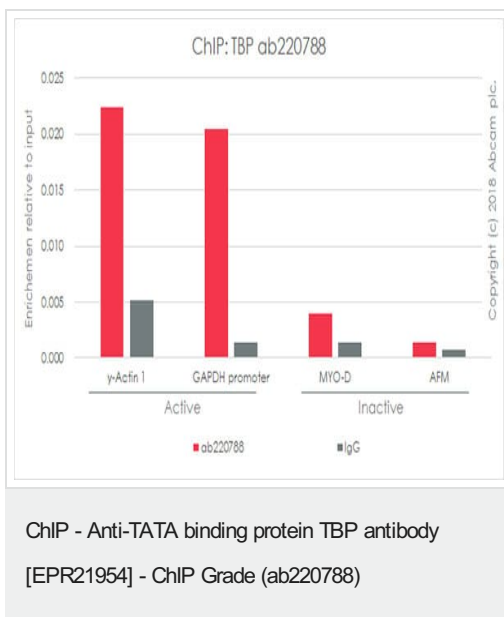
Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with  $30 \mu\text{g}$  of chromatin and  $4 \mu\text{g}$  of ab220788. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 30 million reads. ChIP-Seq validation performed with ChIP-Kit Transcription Factors ChIP-Seq (**ab270813**).

Additional screenshots of mapped reads can be downloaded [here](#).

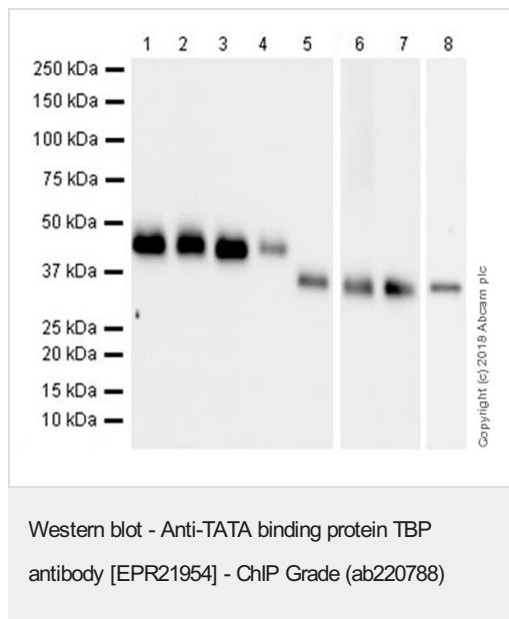


Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 30 µg of chromatin and 4 µg of Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788). ChIP DNA was sequenced on the Illumina NextSeq 500 to a depth of 30 million reads. ChIP-Seq validation performed by Active Motif, Carlsbad, CA.

Additional screenshots of mapped reads can be downloaded [here](#).



Chromatin was prepared from HeLa (human epithelial cell line from cervix adenocarcinoma) cells according to the Abcam X-ChIP protocol. The ChIP was performed with 25 µg of chromatin, 5 µg of ab220788 (red), and 20 µl of Protein A/G sepharose beads. 5 µg of rabbit normal IgG was added to the beads control (gray). The immunoprecipitated DNA was quantified by real time PCR (SYBR green approach). Primers and probes are located in the first kb of the transcribed region.



**All lanes :** Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788) at 1/1000 dilution

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

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

**Lane 3 :** HCT 116 (human colorectal carcinoma cell line) whole cell lysate

**Lane 4 :** MCF7 (human breast adenocarcinoma cell line) whole cell lysate

**Lane 5 :** C2C12 (mouse myoblast cell line) whole cell lysate

**Lane 6 :** Mouse testis lysate

**Lane 7 :** Rat testis lysate

**Lane 8 :** NIH/3T3 (mouse embryo fibroblast 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

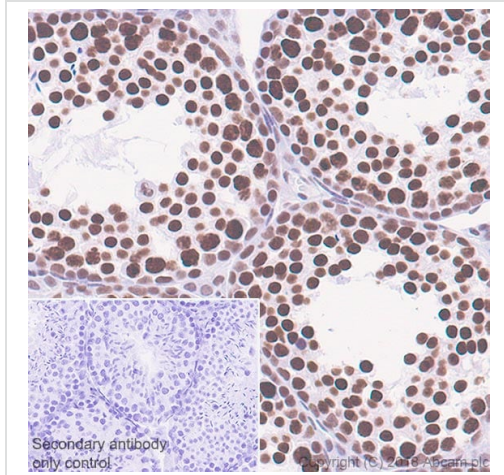
**Predicted band size:** 38 kDa

**Observed band size:** 35,45 kDa

**Exposure times :** Lanes 1-7: 15 seconds, Lane 8: 3 minutes.

Blocking and dilution buffer: 5% NFDM/TBST.

Human TBP migrates with an approximate molecular mass of 45 kDa on SDS-PAGE (PMID:1458534; PMID: 1907890) the molecular mass observed is lower in mouse than in human samples due to a shorter sequence.

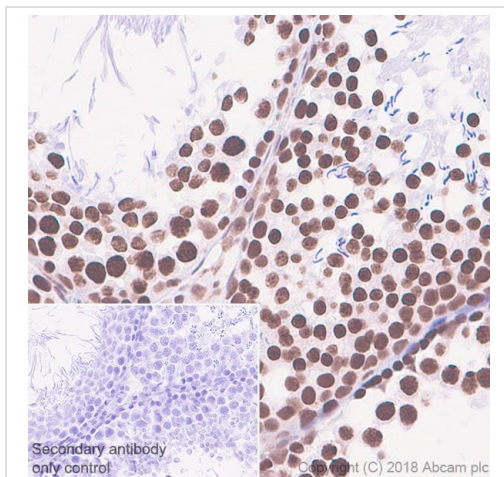


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788)

Immunohistochemical analysis of paraffin-embedded mouse testis tissue labeling TATA binding protein TBP with ab220788 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear staining in mouse testis (PMID: 17570761; PMID: 11861477) 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) ready to use.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



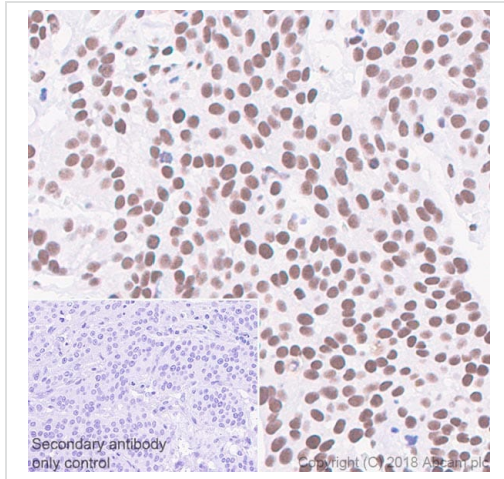
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788)

Immunohistochemical analysis of paraffin-embedded rat testis tissue labeling TATA binding protein TBP with ab220788 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear staining in rat testis (PMID: 17570761; PMID: 11861477) 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) ready to use.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



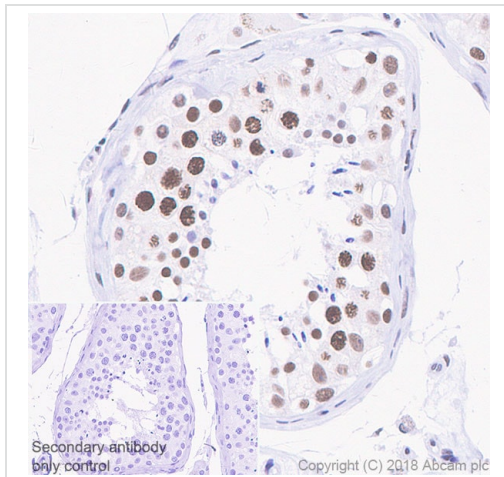


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788)

Immunohistochemical analysis of paraffin-embedded human bladder cancer tissue labeling TATA binding protein TBP with ab220788 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear staining in human bladder cancer (PMID: 17570761; PMID: 11861477) 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) ready to use.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

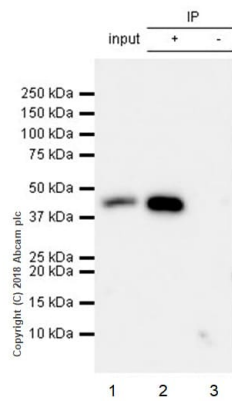


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788)

Immunohistochemical analysis of paraffin-embedded human testis tissue labeling TATA binding protein TBP with ab220788 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear staining in human testis (PMID: 17570761; PMID: 11861477) 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) ready to use.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788)

TATA binding protein TBP was immunoprecipitated from 0.35 mg of HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab220788 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab220788 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/5000 dilution.

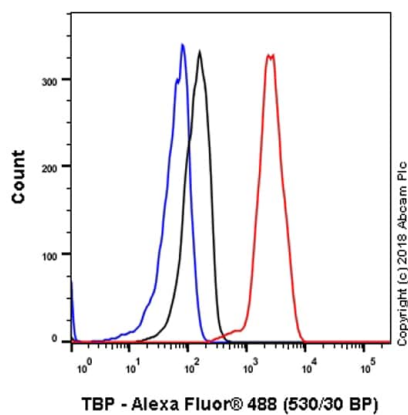
**Lane 1:** HeLa whole cell lysate 10 µg (Input).

**Lane 2:** ab220788 IP in HeLa whole cell lysate.

**Lane 3:** Rabbit monoclonal IgG ([ab172730](#)) instead of ab220788 in HeLa whole cell lysate.

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

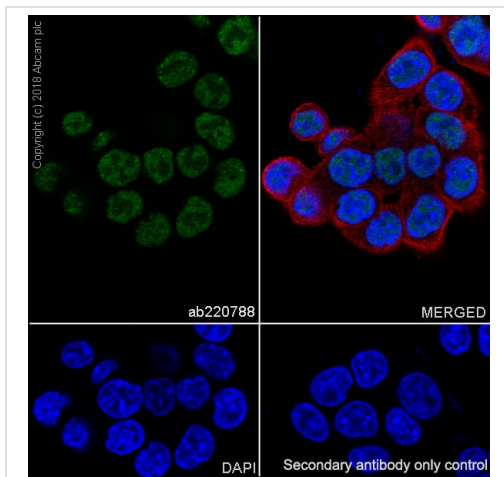
Exposure time: 30 seconds.



Flow Cytometry (Intracellular) - Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling TATA binding protein TBP with ab220788 at 1/500 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control ([ab172730](#)) (black) and an unlabeled control (cells incubated with secondary antibody only) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) ([ab150077](#)), at 1/2000 dilution was used as the secondary antibody.



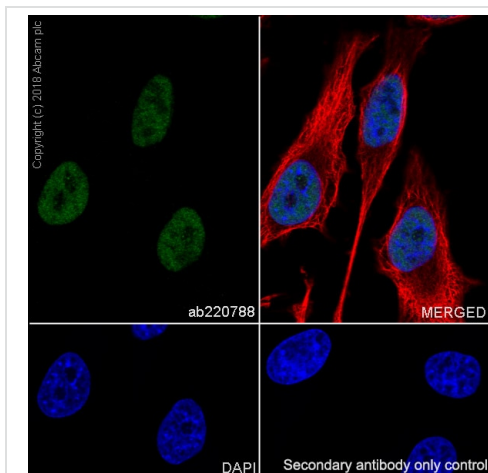


Immunocytochemistry/ Immunofluorescence - Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HCT 116 (human colorectal carcinoma cell line) cells labeling TATA binding protein TBP with ab220788 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining in HCT 116 cells. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-TATA binding protein TBP antibody [EPR21954] - ChIP Grade (ab220788)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling TATA binding protein TBP with ab220788 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining in HeLa cells. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution.

### 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-TATA binding protein TBP antibody [EPR21954]  
- ChIP Grade (ab220788)

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

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