

Product datasheet

Anti-CENPA antibody [EP800Y] - Centromere Marker ab45694

Recombinant RabMAb

★ ★ ★ ★ ★ [2 Abreviews](#) [5 References](#) [9 Images](#)

Overview

Product name	Anti-CENPA antibody [EP800Y] - Centromere Marker
Description	Rabbit monoclonal [EP800Y] to CENPA - Centromere Marker
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P Unsuitable for: Flow Cyt or ICC/IF
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human colon adenocarcinoma, lung carcinoma and prostate carcinoma tissue. Human skin and colon tissue. Human lymphoma tissue. WB: HeLa, A375 and HCT-116 whole cell lysate. Human melanoma. Human placenta lysate.
General notes	<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>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>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, along with publications, customer reviews and Q&As</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. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20

	Preservative: 0.01% Sodium azide
	Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP800Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab45694 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

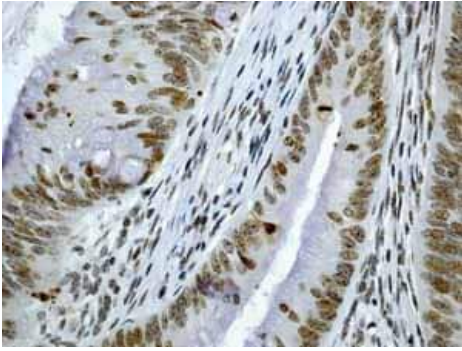
Application	Abreviews	Notes
WB		1/1000 - 1/20000. Detects a band of approximately 18 kDa (predicted molecular weight: 16 kDa).
IHC-P		1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See <u>IHC antigen retrieval protocols</u> .

Application notes Is unsuitable for Flow Cyt or ICC/IF.

Target

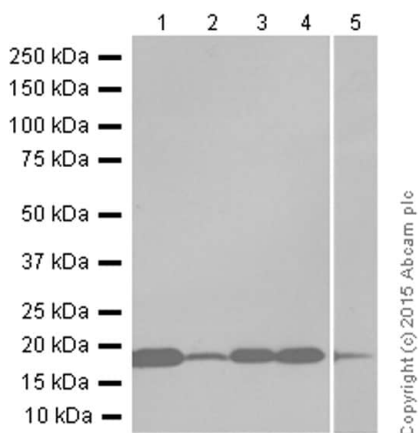
Function	Histone H3-like variant which exclusively replaces conventional H3 in the nucleosome core of centromeric chromatin at the inner plate of the kinetochore. Required for recruitment and assembly of kinetochore proteins, mitotic progression and chromosome segregation. May serve as an epigenetic mark that propagates centromere identity through replication and cell division.
Sequence similarities	Belongs to the histone H3 family.
Domain	The CATD (CENPA targeting domain) region is responsible for the more compact structure of nucleosomes containing CENPA and is necessary and sufficient to mediate the localization into centromeres.
Post-translational modifications	Ubiquitinated (Probable). Interaction with herpes virus HSV-1 ICP0 protein, leads to its degradation by the proteasome pathway. Phosphorylation of Ser-7 by Aurora-A/STK6 and Aurora-B/STK12 during prophase is required for localization of Aurora-A/STK6 and Aurora-B/STK12 at inner centromere and is essential for kinetochore function. Initial phosphorylation during prophase is mediated by Aurora-A/STK6 and is maintained by Aurora-B/STK12.
Cellular localization	Nucleus. Chromosome > centromere > kinetochore. Localizes exclusively in the kinetochore domain of centromeres. Occupies a compact domain at the inner kinetochore plate stretching across 2 thirds of the length of the constriction but encompassing only one third of the constriction width and height.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CENPA antibody [EP800Y] - Centromere Marker (ab45694)

Immunohistochemical analysis of formalin fixed, paraffin embedded colonic adenocarcinoma tissue section labelling CENPA with unpurified ab45694.



Western blot - Anti-CENPA antibody [EP800Y] - Centromere Marker (ab45694)

All lanes : Anti-CENPA antibody [EP800Y] - Centromere Marker (ab45694) at 1/1000 dilution (purified)

Lane 1 : HeLa (human cervix adenocarcinoma) whole cell lysate

Lane 2 : Human melanoma

Lane 3 : A375 (human malignant melanoma) whole cell lysate

Lane 4 : HCT-116 (human colorectal carcinoma) whole cell lysate

Lane 5 : Human placenta lysate

Lysates/proteins at 20 µg per lane.

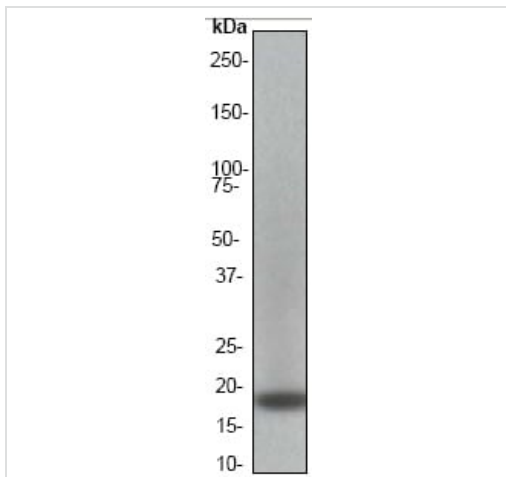
Secondary

All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 16 kDa

Observed band size: 18 kDa

Blocking and diluting buffer 5% NFDM/TBST

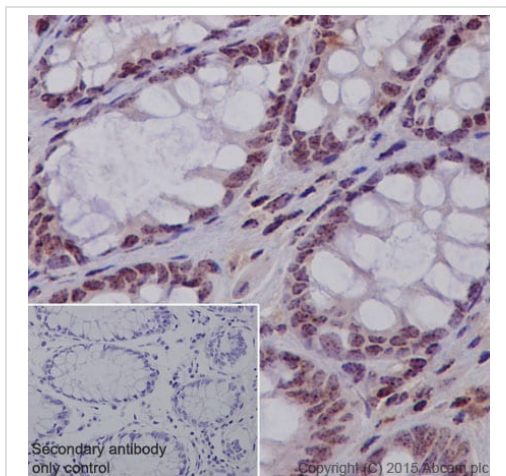


Western blot - Anti-CENPA antibody [EP800Y] - Centromere Marker (ab45694)

Anti-CENPA antibody [EP800Y] - Centromere Marker (ab45694) at 1/20000 dilution (unpurified) + HeLa cell lysate (10ug/lane)

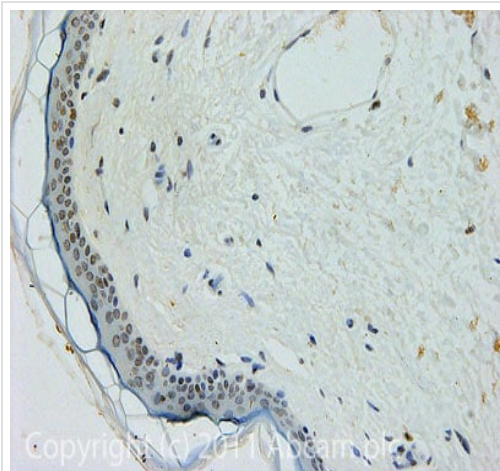
Predicted band size: 16 kDa

Observed band size: 18 kDa



Immunohistochemical analysis of paraffin embedded human colon tissue section labelling CENPA with purified ab45694 at dilution of 1/250. The secondary antibody used was HRP-conjugated Goat Anti-Rabbit IgG H&L ([ab97051](#)) at dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.

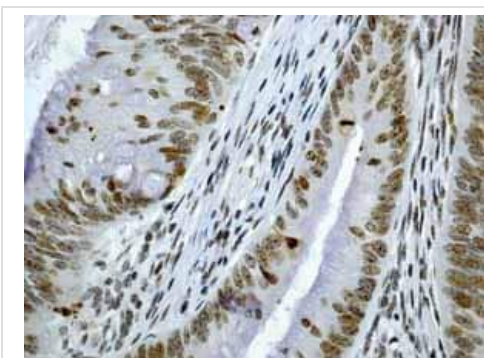
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CENPA antibody [EP800Y] - Centromere Marker (ab45694)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CENPA antibody [EP800Y] - Centromere Marker (ab45694)

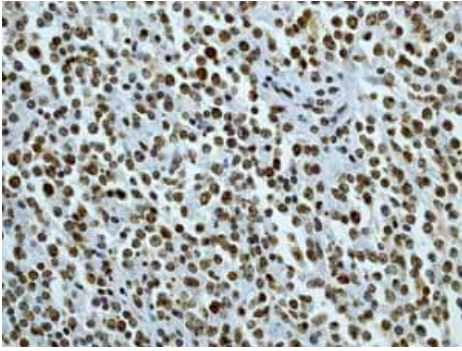
IHC image of ab45694 staining CENPA in Human skin formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with unpurified ab45694, 10µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



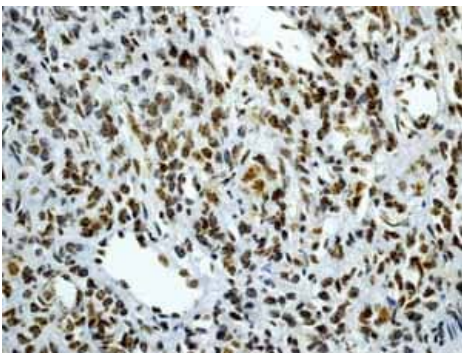
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CENPA antibody [EP800Y] - Centromere Marker (ab45694)

Immunohistochemical analysis of formalin fixed, paraffin embedded colonic adenocarcinoma tissue section labelling CENPA with unpurified ab45694.



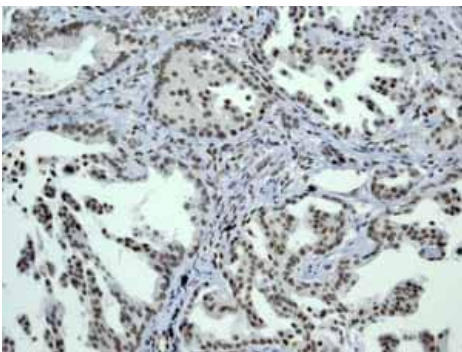
Immunohistochemical analysis of formalin fixed, paraffin embedded Lymphoma tissue section labelling CENPA with unpurified ab45694.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CENPA antibody
[EP800Y] - Centromere Marker (ab45694)



Immunohistochemical analysis of formalin fixed, paraffin embedded prostatic carcinoma tissue section labelling CENPA with unpurified ab45694.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CENPA antibody
[EP800Y] - Centromere Marker (ab45694)



Immunohistochemical analysis of formalin fixed, paraffin embedded lung carcinoma tissue section labelling CENPA with unpurified ab45694.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CENPA antibody
[EP800Y] - Centromere Marker (ab45694)

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

- Replacement or refund for products not performing as stated on the datasheet
- 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.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors