abcam

Product datasheet

# Anti-USP22 antibody [EPR18945] - BSA and Azide free ab238948

KO VALIDATED Recombinant RabMAb

8 Images

## Overview

| | |
|---|---|
| **Product name** | Anti-USP22 antibody [EPR18945] - BSA and Azide free |
| **Description** | Rabbit monoclonal [EPR18945] to USP22 - BSA and Azide free |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** IHC-P, WB, IP |
| **Species reactivity** | **Reacts with:** Mouse, Rat, Human |
| **Immunogen** | Recombinant fragment. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | WB: Human fetal liver, fetal heart and fetal kidney lysates; HeLa, HEK-293, Jurkat, HepG2, MCF7, Neuro-2a, F9, C6, RAW 264.7, PC-12 and NIH/3T3 whole cell lysates; Mouse brain and spleen lysates; Rat brain and spleen lysates. IP: HeLa whole cell lysate. IHC-P: Human, mouse and rat cerebrum tissue; Human breast carcinoma tissue. |
| **General notes** | ab238948 is the carrier-free version of **ab195289**.<br><br>Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.<br><br>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.<br><br>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.<br><br>This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.<br><br>This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br><br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit |

monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

## Properties

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|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C. Do Not Freeze. |
| **Storage buffer** | pH: 7.2<br>Constituent: PBS |
| **Carrier free** | Yes |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EPR18945 |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab238948 in the following tested applications.

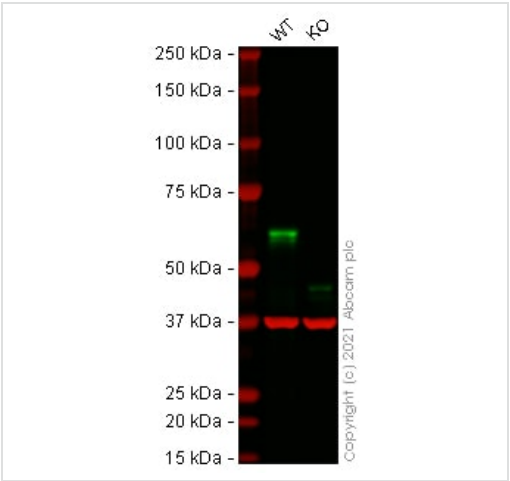
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **IHC-P** | | 1/1000. |
| **WB** | | Use at an assay dependent concentration. Detects a band of approximately 60 kDa (predicted molecular weight: 60 kDa). |
| **IP** | | Use at an assay dependent concentration. |

## Target

| | |
|---|---|
| **Function** | Histone deubiquitinating component of the transcription regulatory histone acetylation (HAT) complex SAGA. Catalyzes the deubiquitination of both histones H2A and H2B, thereby acting as a coactivator. Recruited to specific gene promoters by activators such as MYC, where it is required for transcription. Required for nuclear receptor-mediated transactivation and cell cycle progression. |
| **Tissue specificity** | Moderately expressed in various tissues including heart and skeletal muscle, and weakly expressed in lung and liver. |
| **Sequence similarities** | Belongs to the peptidase C19 family. UBP8 subfamily.<br>Contains 1 UBP-type zinc finger. |
| **Cellular localization** | Nucleus. |

## Images




Western blot - Anti-USP22 antibody [EPR18945] - BSA and Azide free (ab238948)

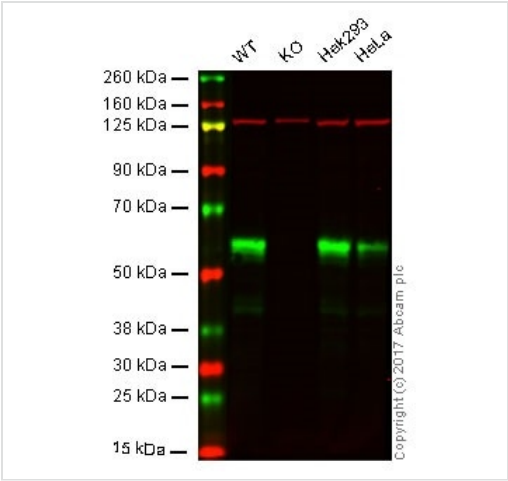
**All lanes :** Anti-USP22 antibody [EPR18945] (**ab195289**) at 1/2000 dilution

**Lane 1 :** Wild-type HeLa cell lysate
**Lane 2 :** USP22 knockout HeLa cell lysate

Performed under reducing conditions.

**Predicted band size:** 60 kDa
**Observed band size:** 59 kDa

False colour image of Western blot: Anti-USP22 antibody [EPR18945] staining at 1/2000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in red. In Western blot, **ab195289** was shown to bind specifically to USP22. A band was observed at 59 kDa in wild-type HeLa cell lysates with no signal observed at this size in usp22 knockout cell line **ab264888** (knockout cell lysate **ab257789**). To generate this image, wild-type and usp22 knockout HeLa cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged.Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



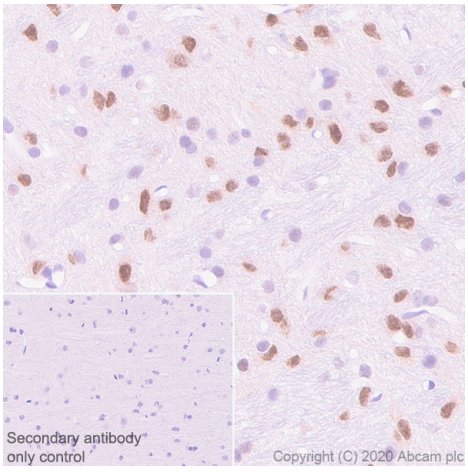

Western blot - Anti-USP22 antibody [EPR18945] - BSA and Azide free (ab238948)

**Lane 1:** Wild-type HAP1 whole cell lysate (20 µg)
**Lane 2:** USP22 knockout HAP1 whole cell lysate (20 µg)
**Lane 3:** HEK293 whole cell lysate (20 µg)
**Lane 4:** HeLa whole cell lysate (20 µg)

**Lanes 1 - 4:** Merged signal (red and green). Green - **ab195289** observed at 60 kDa. Red - loading control, **ab9484**, observed at 37 kDa.

**ab195289** was shown to specifically react with USP22 in wild-type HAP1 cells. No band was observed when knockout samples were examined. Wild-type and USP22 knockout samples were subjected to SDS-PAGE. Ab195289 and **ab9484** (Mouse anti GAPDH loading control) were incubated overnight at 4°C at a 1/2000 dilution and 1/20,000 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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195289**).



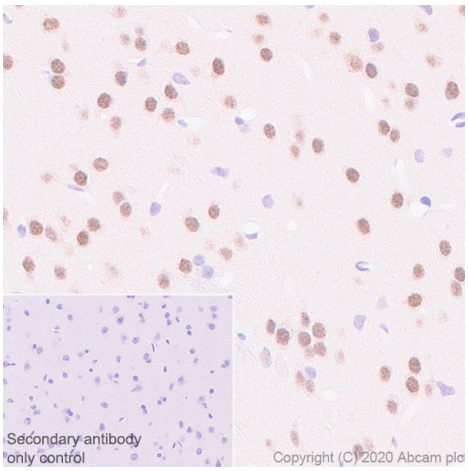

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-USP22 antibody [EPR18945] - BSA and Azide free (ab238948)

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling USP22 with **ab195289** at 1/1000 followed by a Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) Ready to use. Nuclear staining on rat cerebrum. The section was incubated with **ab195289** for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) Ready to use.

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195289**).



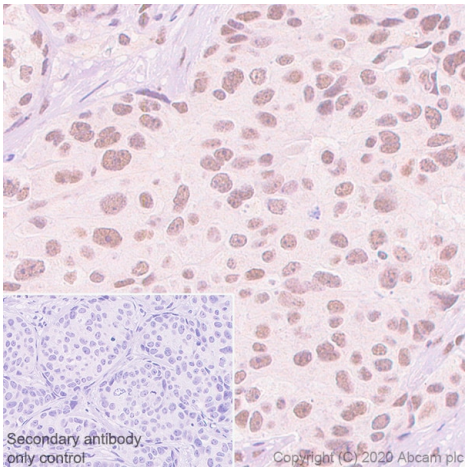

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-USP22 antibody [EPR18945] - BSA and Azide free (ab238948)

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling USP22 with **ab195289** at 1/1000 followed by a Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) Ready to use. Nuclear staining on mouse cerebrum. The section was incubated with **ab195289** for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) Ready to use.

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195289**).



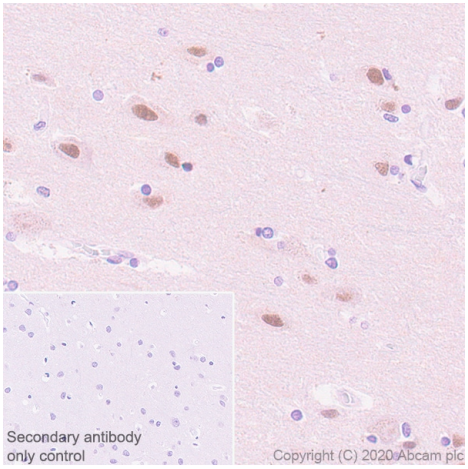

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-USP22 antibody [EPR18945] - BSA and Azide free (ab238948)

Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labeling USP22 with **ab195289** at 1/100 followed by a Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) Ready to use. Nuclear staining on human breast carcinoma. The section was incubated with **ab195289** for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) Ready to use.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195289**).



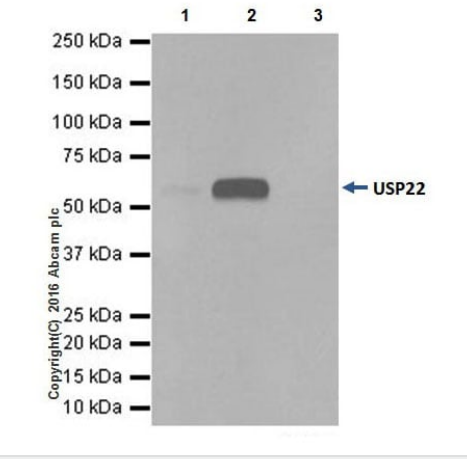

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-USP22 antibody [EPR18945] - BSA and Azide free (ab238948)

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling USP22 with **ab195289** at 1/100 followed by a Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) Ready to use dilution. Nuclear staining on human cerebrum. The section was incubated with **ab195289** for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) Ready to use.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195289**).




Immunoprecipitation - Anti-USP22 antibody [EPR18945] - BSA and Azide free (ab238948)

USP22 was immunoprecipitated from 0.35 mg of HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate with **ab195289** at 1/40 dilution. Western blot was performed from the immunoprecipitate using **ab195289** at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

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

Lane 2: **ab195289** IP in HeLa whole cell lysate.

Lane 3: Rabbit IgG,monoclonal [EPR25A]- Isotype Control (**ab172730**) instead of **ab195289** in HeLa whole cell lysate.

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

Exposure time: 3 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195289**).


Anti-USP22 antibody [EPR18945] - BSA and Azide free (ab238948)

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