abcam

Product datasheet

Anti-WSTF antibody [EPR1703] ab109439

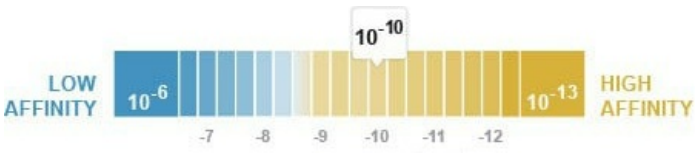
KO VALIDATED Recombinant RabMAb

5 Images

Overview

Product name	Anti-WSTF antibody [EPR1703]
Description	Rabbit monoclonal [EPR1703] to WSTF
Host species	Rabbit
Tested applications	**Suitable for:** WB **Unsuitable for:** ICC/IF,IHC-P or IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HAP1, 293T, HeLa, HT-1080, PC-12, and SH-SY5Y cell lysates.
General notes	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**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Dissociation constant (K_D)	$K_D = 1.23 \times 10^{-10}$ M  **Learn more about K_D**
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue

	culture supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR1703
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab109439 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 - 1/10000. Detects a band of approximately 185 kDa (predicted molecular weight: 171 kDa).

Application notes Is unsuitable for ICC/IF,IHC-P or IP.

Target

Function Atypical tyrosine-protein kinase that plays a central role in chromatin remodeling and acts as a transcription regulator. Involved in DNA damage response by phosphorylating 'Tyr-142' of histone H2AX (H2AXY142ph). H2AXY142ph plays a central role in DNA repair and acts as a mark that distinguishes between apoptotic and repair responses to genotoxic stress. Essential component of the WICH complex, a chromatin remodeling complex that mobilizes nucleosomes and reconfigures irregular chromatin to a regular nucleosomal array structure. The WICH complex regulates the transcription of various genes, has a role in RNA polymerase I and RNA polymerase III transcription, mediates the histone H2AX phosphorylation at 'Tyr-142', and is involved in the maintenance of chromatin structures during DNA replication processes. In the complex, it mediates the recruitment of the WICH complex to replication foci during DNA replication. Also involved in vitamin D-coupled transcription regulation via its association with the WINAC complex, a chromatin-remodeling complex recruited by vitamin D receptor (VDR), which is required for the ligand-bound VDR-mediated transrepression of the CYP27B1 gene. In the WINAC complex, plays an essential role by targeting the complex to acetylated histones, an essential step for VDR-promoter association.

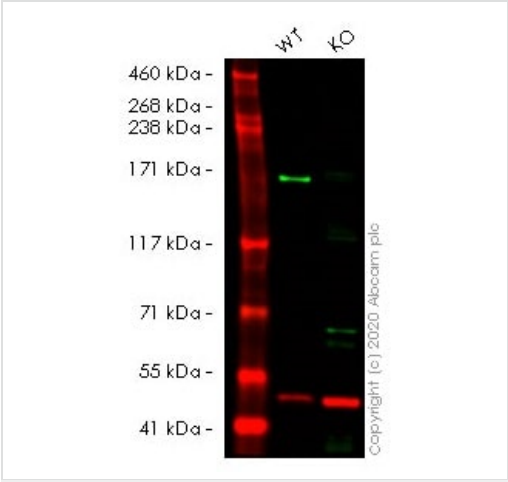
Tissue specificity Ubiquitously expressed with high levels of expression in heart, brain, placenta, skeletal muscle and ovary.

Involvement in disease Note=BAZ1B is located in the Williams-Beuren syndrome (WBS) critical region. WBS results from a hemizygous deletion of several genes on chromosome 7q11.23, thought to arise as a consequence of unequal crossing over between highly homologous low-copy repeat sequences flanking the deleted region. Haploinsufficiency of BAZ1B may be the cause of certain cardiovascular and musculo-skeletal abnormalities observed in the disease.

Sequence similarities Belongs to the WAL family. BAZ1B subfamily.
Contains 1 bromo domain.
Contains 1 DDT domain.
Contains 1 PHD-type zinc finger.
Contains 1 WAC domain.

Developmental stage	Expressed at equal levels in 19-23 weeks old fetal tissues.
Domain	The N-terminal part (1-345), including the WAC domain and the C motif, mediates the tyrosine-protein kinase activity. The bromo domain mediates the specific interaction with acetylated histones.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Cellular localization	Nucleus. Accumulates in pericentromeric heterochromatin during replication. Targeted to replication foci throughout S phase via its association with PCNA.

Images



Western blot - Anti-WSTF antibody [EPR1703] (ab109439)

All lanes : Anti-WSTF antibody [EPR1703] (ab109439) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : WSTF knockout HeLa cell lysate

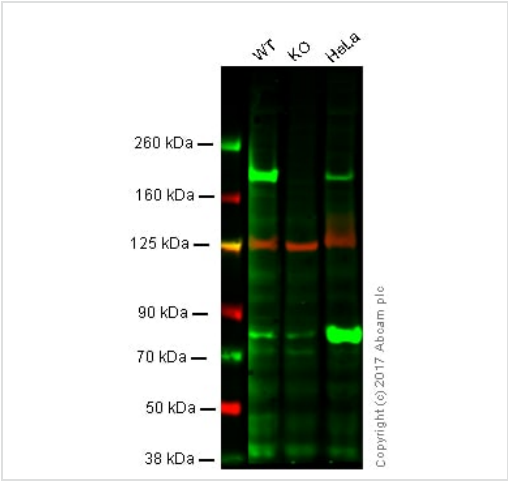
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 171 kDa
Observed band size: 171 kDa

Lanes 1- 2: Merged signal (red and green). Green - ab109439 observed at 171 kDa. Red - Anti-alpha Tubulin antibody [DM1A] - Loading Control (**ab7291**) observed at 50 kDa.

ab109439 was shown to react with WSTF in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line **ab264907** (knockout cell lysate **ab257370**) was used. Wild-type HeLa and WSTF knockout HeLa 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. ab109439 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.



Western blot - Anti-WSTF antibody [EPR1703] (ab109439)

All lanes : Anti-WSTF antibody [EPR1703] (ab109439) at 1/1000 dilution

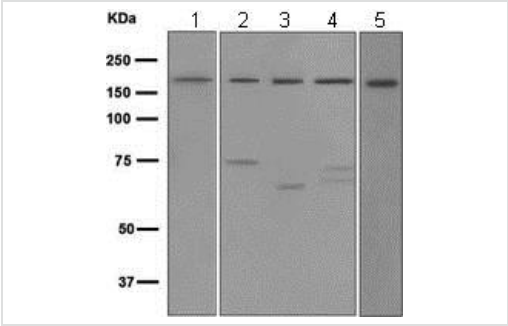
Lane 1 : Wild type HAP1 whole cell lysate
Lane 2 : BAZ1B knockout HAP1 whole cell lysate
Lane 3 : HeLa whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 171 kDa

Lanes 1 - 3: Merged signal (red and green). Green - ab109439 observed at 171 kDa. Red - loading control, **ab18058**, observed at 130 kDa.

Ab109439 was shown to recognize BAZ1B in wild-type cells along with additional cross-reactive bands as signal was lost in BAZ1B knockout samples. Wild-type and BAZ1B knockout samples were subjected to SDS-PAGE. Ab109439 and **ab18058** (Mouse anti Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10000 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 1/10000 dilution for 1 hour at room temperature before imaging.



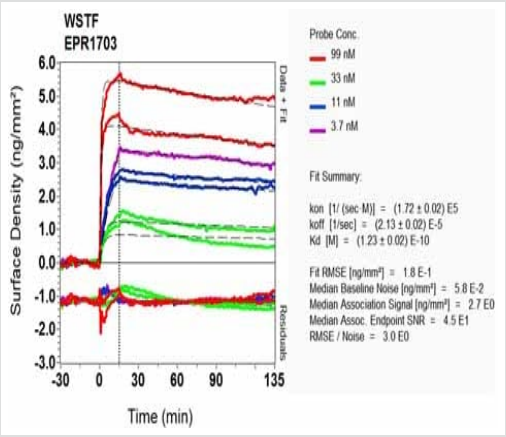
Western blot - Anti-WSTF antibody [EPR1703] (ab109439)

All lanes : Anti-WSTF antibody [EPR1703] (ab109439) at 1/1000 dilution

Lane 1 : 293T cell lysates
Lane 2 : HeLa cell lysates
Lane 3 : HT-1080 cell lysates
Lane 4 : PC-12 cell lysates
Lane 5 : SH-SY5Y cell lysates

Lysates/proteins at 10 µg per lane.

Predicted band size: 171 kDa
Observed band size: 185 kDa



OI-RD Scanning - Anti-WSTF antibody [EPR1703] (ab109439)

Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D

Anti-WSTF antibody [EPR1703] (ab109439)

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