abcam

ab228986

Anti-ZEB1 antibody [EPR17375] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR17375
Purification technique	Affinity purification Protein A
Specificity	Expression levels of the target protein vary with sample type and some optimisation may be required.
Concentration	1.009 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human

Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG (Low endotoxin, Azide free), is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information ZEB1

Function	Acts as a transcriptional repressor. Inhibits interleukin-2 (IL-2) gene expression. Enhances or represses the promoter activity of the ATP1A1 gene depending on the quantity of cDNA and on the cell type. Represses E-cadherin promoter and induces an epithelial-mesenchymal transition (EMT) by recruiting SMARCA4/BRG1. Represses BCL6 transcription in the presence of the corepressor CTBP1. Positively regulates neuronal differentiation. Represses RCOR1 transcription activation during neurogenesis. Represses transcription by binding to the E box (5'-CANNTG-3'). In the absence of TGFB1, acts as a repressor of COL1A2 transcription via binding to the E-box in the upstream enhancer region (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab228986 is the carrier-free version of ab203829.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. 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.

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.

Compatibility

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	ZEB1 also known as δEF1 is a zinc finger E-box-binding homeobox protein with a molecular weight of approximately 124 kDa. It acts as a transcription factor and plays an important role in the regulation of gene expression by binding to specific DNA sequences. ZEB1 is mainly expressed in epithelial and mesenchymal cells and is involved in a variety of developmental processes during embryogenesis. Its broad expression pattern reflects its versatile function in different tissues and cell types.
Biological function summary	ZEB1 modulates cellular differentiation and identity by repressing and activating target genes. This protein is particularly notable for its involvement in the epithelial-to-mesenchymal transition (EMT) an important biological process for development and wound healing. ZEB1 doesn't act alone; it forms complexes with other transcription factors and co-repressors such as SMAD and CtBP enhancing its regulatory reach. Through these interactions ZEB1 influences cell adhesion molecules and cytoskeletal components facilitating cell motility and invasion.

Pathways	ZEB1 is integral to the TGF-β signaling pathway influencing cellular responses to growth factors. It also intersects with the Wnt signaling pathway linking it to cellular proliferation and differentiation. Through these pathways ZEB1 interacts with other significant proteins including β-catenin and SMAD proteins which collaboratively regulate gene expression that affects cell phenotype and behavior.
Associated diseases and disorders	The dysregulation of ZEB1 is associated with a variety of pathological conditions including cancer and fibrotic diseases. In cancer ZEB1 contributes to tumor progression and metastasis by promoting EMT a process that enables epithelial cells to acquire mesenchymal traits enhancing their migratory capabilities. This mechanism links ZEB1 to the expression of vimentin and the suppression of E-cadherin important markers in cancer prognosis. Additionally in fibrotic disorders ZEB1's interaction with TGF-β signaling promotes pathological tissue remodeling impacting fibrosis development in organs like the liver and lungs.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

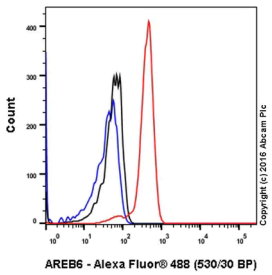
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

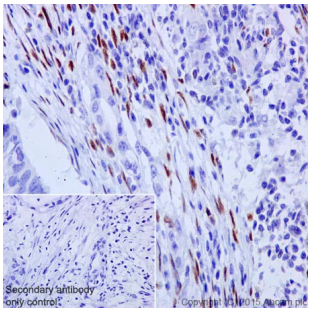
6 product images



Flow Cytometry (Intracellular) - Anti-ZEB1 antibody [EPR17375] - BSA and Azide free (ab228986)

ZEB1 Flow Cytometry (Intracellular) staining using rabbit Anti-ZEB1 antibody

Intracellular Flow Cytometry analysis of HeLa cells labelling ZEB1 with ab203829 at 1/1000 (red). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. An Alexa Fluor¨ 488-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab203829).



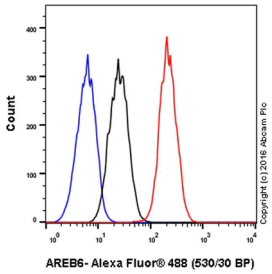
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZEB1 antibody [EPR17375] - BSA and Azide free (ab228986)

ZEB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ZEB1 antibody

This IHC data was generated using the same anti-ZEB1 antibody clone, EPR17375, in a different buffer formulation (cat# ab203829).
Immunohistochemical analysis of paraffin-embedded Human cervix carcinoma tissue labeling ZEB1 with ab203829 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Nuclear staining on Human cervix carcinoma tissue 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) (ab97051) at 1/500 dilution.

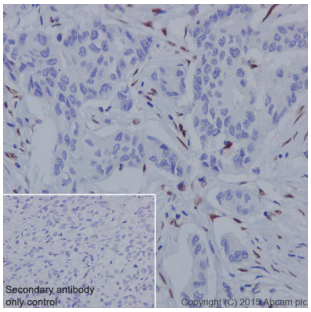
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-ZEB1 antibody [EPR17375] - BSA and Azide free (ab228986)

ZEB1 Flow Cytometry (Intracellular) staining using rabbit Anti-ZEB1 antibody

Intracellular flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling ZEB1 with purified ab203829 at 1/50 dilution (10ug/mL) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab203829).



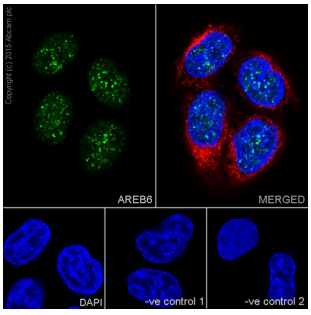
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ZEB1 antibody [EPR17375] - BSA and Azide free (ab228986)

ZEB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ZEB1 antibody

Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labeling ZEB1 with ab203829 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Nuclear staining on Human breast carcinoma tissue 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) (ab97051) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab203829).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

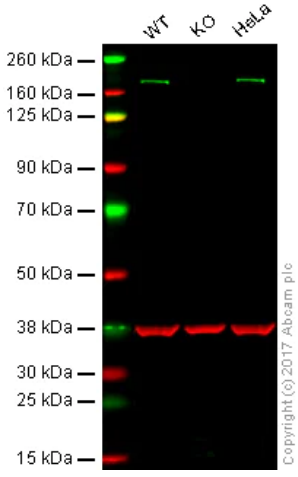


Immunocytochemistry/ Immunofluorescence - Anti-ZEB1 antibody [EPR17375] - BSA and Azide free (ab228986)

ZEB1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ZEB1 antibody

This ICC data was generated using the same anti-ZEB1 antibody clone, EPR17375, in a different buffer formulation (cat# ab203829).
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling ZEB1 with ab203829 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining on HeLa cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (Alexa Fluor® 594 Goat anti-Mouse secondary) at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab203829 at 1/250 dilution followed by ab150120 (Alexa Fluor® 594 Goat anti-Mouse secondary) at 1/1000 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor® 488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Western blot - Anti-ZEB1 antibody [EPR17375] - BSA and Azide free (ab228986)

ZEB1 Western blot staining using rabbit Anti-ZEB1 antibody

Lanes 1 - 3: Merged signal (red and green). Green - ab203829 observed at 200 kDa. Red - loading control, ab9484, observed at 37 kDa. ab203829 was shown to specifically react with ZEB1 in wild-type HAP1 cells as signal was lost in ZEB1 knockout cells. Wild-type and ZEB1 knockout samples were subjected to SDS-PAGE. ab203829 and ab9484 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 and 1/20000 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 1/20000 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 (ab203829).

Lane 1:
Western blot - Anti-ZEB1 antibody [EPR17375] (ab203829)

Lanes 2 - 3:
Western blot - Anti-ZEB1 antibody [EPR17375] - BSA and Azide free (ab228986) at 1/1000 dilution

Lane 1:
Wild-type HAP1 whole cell lysate at 20 µg

Lane 2:
ZEB1 knockout HAP1 whole cell lysate at 20 µg

Lane 3:
HeLa whole cell lysate at 20 µg

Predicted band size: 124 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.