abcam

Product datasheet

Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] ab108311

KO VALIDATED Recombinant RabMAb

★★★★★ 2 Abreviews 9 References 10 Images

Overview

Product name	Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)]
Description	Rabbit monoclonal [EPR2688(2)] to Transcription factor AP-2-alpha
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB, IHC-P, IP, Flow Cyt
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human Transcription factor AP-2-alpha aa 100-200. The exact sequence is proprietary.
Positive control	IP: HeLa whole cell lysate; Flow Cyt: JAR cells; ICC: JAR cells; IHC-P: Human breast carcinoma, and mouse and rat breast tissue; WB: HeLa, C6, Mouse skin and HAP1 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.

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and

species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.5% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR2688(2)
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab108311** in the following tested applications.

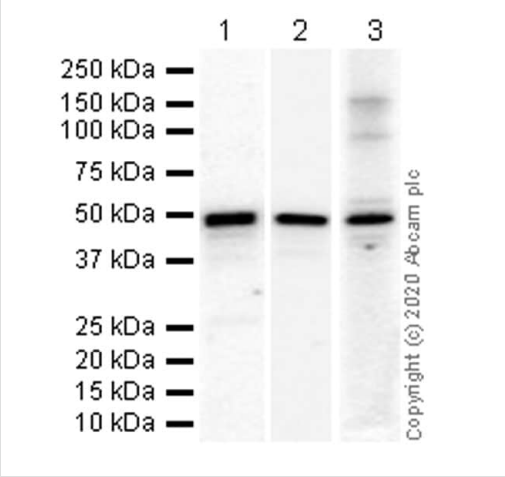
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★	1/50.
WB		1/1000 - 1/10000. Predicted molecular weight: 48 kDa.
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval via the pressure cooker method before commencing with IHC staining protocol.
IP		1/20.
Flow Cyt		1/20.

Target

Function	Sequence-specific DNA-binding protein that interacts with inducible viral and cellular enhancer elements to regulate transcription of selected genes. AP-2 factors bind to the consensus sequence 5'-GCCNNNGGC-3' and activate genes involved in a large spectrum of important biological functions including proper eye, face, body wall, limb and neural tube development. They also suppress a number of genes including MCAM/MUC18, C/EBP alpha and MYC. AP-2-alpha is the only AP-2 protein required for early morphogenesis of the lens vesicle.
Involvement in disease	Defects in TFAP2A are the cause of branchiooculofacial syndrome (BOFS) [MIM:113620]; also known as branchial clefts with characteristic facies, growth retardation, imperforate nasolacrimal duct, and premature aging or lip pseudocleft-hemangiomatous branchial cyst syndrome. BOFS is a rare autosomal dominant cleft palate craniofacial disorder with variable expressivity. The major features include cutaneous anomalies, ocular anomalies, characteristic facial appearance (malformed pinnae, oral clefts), and, less commonly, renal and ectodermal (dental and hair) anomalies.
Sequence similarities	Belongs to the AP-2 family.
Domain	The WW-binding motif mediates interaction with WWOX.
Post-translational modifications	Sumoylated on Lys-10; which inhibits transcriptional activity.
Cellular localization	Nucleus.

Images



Western blot - Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

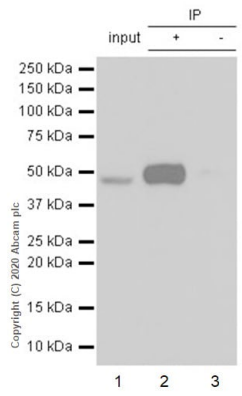
All lanes : Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311) at 1/10000 dilution (Purified)

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate
Lane 2 : C6 (Rat glial tumor glial cell) whole cell lysate
Lane 3 : Mouse skin lysate

Lysates/proteins at 15 µg per lane.

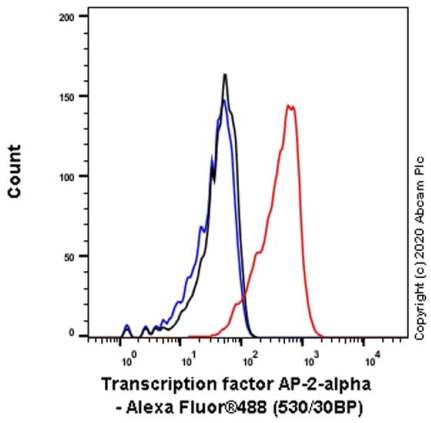
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 48 kDa



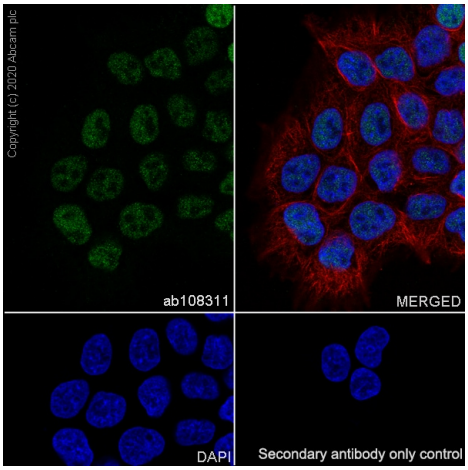
Immunoprecipitation - Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

Purified ab108311 at 1/20 dilution (0.5µg) immunoprecipitating Transcription factor AP-2-alpha in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab108311 + HeLa whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab108311 in HeLa whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/10,000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 48 kDa



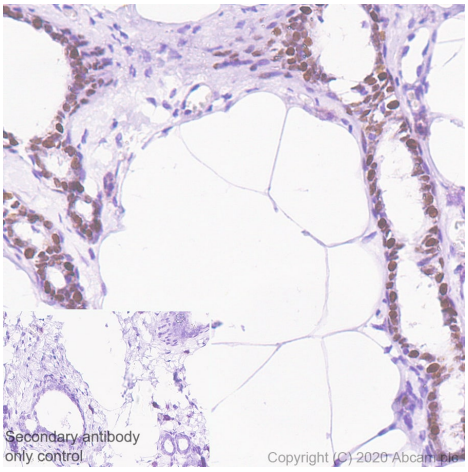
Flow Cytometry - Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

Flow Cytometry analysis of JAR (Human placenta choriocarcinoma epithelial cell) cells labeling Transcription factor AP-2-alpha with Purified ab108311 at 1/20 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



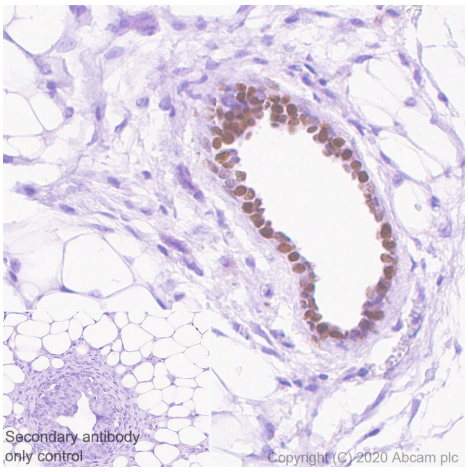
Immunocytochemistry - Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

Immunocytochemistry analysis of JAR (Human placenta choriocarcinoma epithelial cell) cells labeling Transcription factor AP-2-alpha with Purified ab108311 at 1/50 dilution (3.4 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 dilution (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 dilution (2 µg/mL). DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



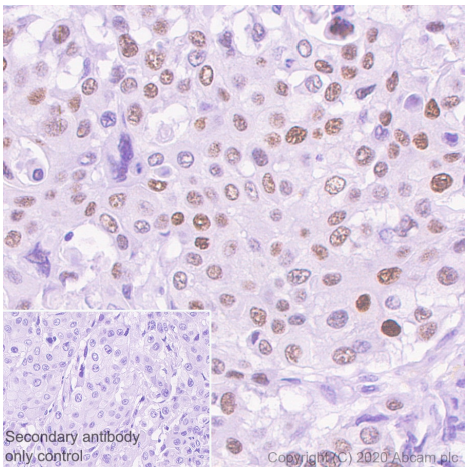
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat breast tissue sections labeling Transcription factor AP-2-alpha with Purified ab108311 at 1/100 dilution (1.07 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



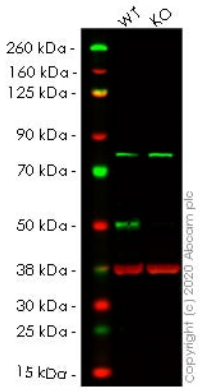
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse breast tissue sections labeling Transcription factor AP-2-alpha with Purified ab108311 at 1/100 dilution (1.07 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast carcinoma tissue sections labeling Transcription factor AP-2-alpha with Purified ab108311 at 1/100 dilution (1.07 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

All lanes : Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : TFAP2A knockout HeLa cell lysate

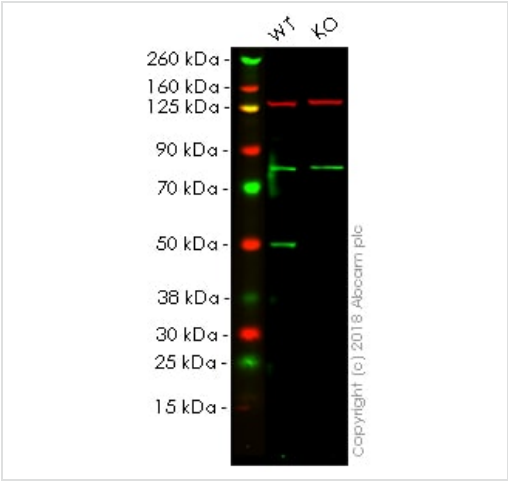
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 48 kDa
Observed band size: 48 kDa

Lanes 1- 2: Merged signal (red and green). Green - ab108311 observed at 48 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (ab8245) observed at 37 kDa.

ab108311 was shown to react with Transcription factor AP-2-alpha in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line ab265122 (knockout cell lysate ab257736) was used. Wild-type HeLa and TFAP2A knockout HeLa cell lysates were subjected to SDS-PAGE. ab108311 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated 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-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

All lanes : Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : TFAP2A (Transcription factor AP-2-alpha) knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 48 kDa

Lanes 1 - 2: Merged signal (red and green). Green - ab108311 observed at 48 kDa. Red - loading control, ab9484, observed at 37 kDa.

ab108311 was shown to recognize Transcription factor AP-2-alpha in wild-type HAP1 cells as signal was lost at the expected MW in TFAP2A (Transcription factor AP-2-alpha) knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and TFAP2A (Transcription factor AP-2-alpha) knockout samples were subjected to SDS-PAGE. Ab108311 and ab9484 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution 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.

Anti-Transcription factor AP-2-alpha antibody [EPR2688(2)] (ab108311)

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