abcam

ab218107

Anti-AP2 gamma/TFAP2C antibody [EPR20331]

Recombinant | RabMAb | Advanced Validation | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR20331
Purification technique	Affinity purification Protein A
Concentration	0.511 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

mIHC

Tested

Species	Human
Dilution info	1/200

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

Target data

See full target information Transcription factor AP-2 gamma

Function	Sequence-specific DNA-binding transcription factor that interacts with cellular enhancer elements to regulate transcription of selected genes, and which plays a key role in early embryonic development (PubMed:11694877, PubMed:24413532). AP-2 factors bind to the consensus sequence 5'-GCCNNNGGC-3' and activate genes involved in a large spectrum of important biological functions (PubMed:11694877, PubMed:24413532). TFAP2C plays a key role in early embryonic development by regulating both inner cell mass (ICM) and trophectoderm differentiation (By similarity). At the 8-cell stage, during morula development, controls expression of cell-polarity genes (By similarity). Upon trophoblast commitment, binds to late trophectoderm genes in blastocysts together with CDX2, and later to extra-embryonic ectoderm genes together with SOX2 (By similarity). Binds to both closed and open chromatin with other transcription factors (By similarity). Involved in the MTA1-mediated epigenetic regulation of ESR1 expression in breast cancer (PubMed:24413532).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	AP2 gamma also known as TFAP2C functions as a transcription factor and belongs to the AP-2 family. AP2 gamma has a molecular weight of approximately 50 kDa. It regulates gene expression by binding to DNA sequence-specific sites influencing diverse cellular processes. This protein commonly expresses in tissues like mammary glands and is important in embryonic development. TFAP2C plays a role in differentiation and development across different cell types.
Biological function summary	AP2 gamma acts as a significant regulator of gene networks that control cell growth and differentiation. This protein contributes to transcriptional activation and repression often functioning within multiprotein complexes. It regulates the expression of genes involved in epithelial cell differentiation and morphogenesis. Importantly TFAP2C helps in the development of ectodermal tissues supporting cellular behaviors necessary for proper tissue formation.
Pathways	TFAP2C is involved in pathways that include developmental processes and differentiation. In particular it takes part in the Wnt signaling pathway influencing gene expression patterns that govern development. AP2 gamma interacts with proteins such as beta-catenin within the Wnt pathway modulating cell fate and proliferation. Another important pathway is the estrogen receptor signaling pathway where TFAP2C partners with proteins like ERα to regulate hormone-responsive genes.
Associated diseases and disorders	AP2 gamma has links to breast cancer and neural tube defects. In breast cancer TFAP2C modulates genes associated with cancer progression and treatment response interacting with proteins like HER2. Mutations or dysregulation of TFAP2C can also lead to developmental anomalies like neural tube defects possibly due to altered gene expression during embryonic development. Understanding these connections provides insight into therapeutic strategies and developmental biology.

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.

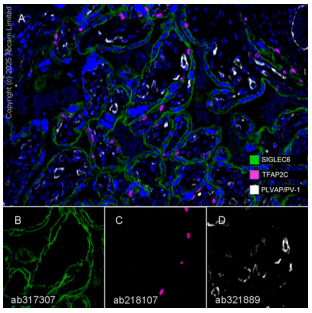
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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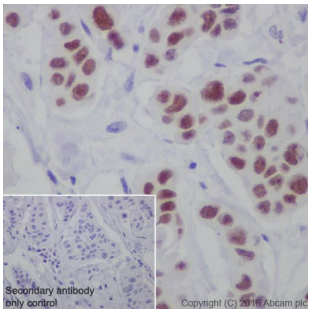
12 product images



Multiplex immunohistochemistry - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

AP2 gamma/TFAP2C Multiplex immunohistochemistry staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Panel A: anti-SIGLEC6 (green; Opal™520), anti-TFAP2C (magenta; Opal™690) and anti-PLVAP/PV-1 (gray; Opal™570) on human placenta. Panel B: anti-SIGLEC6 staining membrane of trophoblast in human placenta. Panel C: anti-TFAP2C staining nucleus of trophoblast in human placenta. Panel D: anti-PLVAP/PV-1 staining endothelium in human placenta. Nuclear DNA was labeled with DAPI (shown in blue). The section was incubated in three rounds of staining: in the order of ab317307, ab218107 and ab321889 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

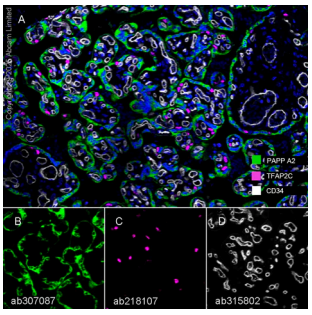
AP2 gamma/TFAP2C Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Immunohistochemical analysis of paraffin-embedded human breast cancer tissue labeling AP2 gamma/TFAP2C with ab218107 at 1/2000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.
Nuclear staining on poorly differentiated human breast cancer is observed. The data is consistent with the literature (PMID: 18825690).

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

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



Multiplex immunohistochemistry - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

AP2 gamma/TFAP2C Multiplex immunohistochemistry staining of Human placenta using rabbit Anti-AP2 gamma/TFAP2C antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded human placenta tissue staining PAPP A2 with ab307087 at a 1/5000 dilution, ab218107 anti-TFAP2C used at 1/200 dilution and ab315802 anti-CD34 used at a 1/2000 dilution.
Panel A: anti-PAPP A2 (green; Opal™520), anti-TFAP2C (magenta; Opal™690) and anti-CD34 (gray; Opal™570) on human placenta.

Panel B: anti-PAPP A2 staining cytoplasm of trophoblast in human placenta.

Panel C: anti-TFAP2C staining nucleus of trophoblast in human placenta.

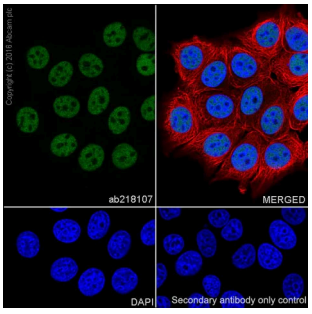
Panel D: anti-CD34 staining endothelium in human placenta.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab307087, ab218107 and ab315802 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

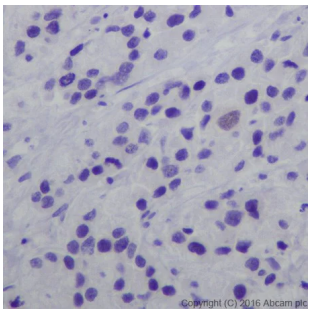
AP2 gamma/TFAP2C Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized MCF7 (Human breast adenocarcinoma cell line) cells labeling AP2 gamma/TFAP2C with ab218107 at 1/500 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing nuclear staining on MCF7 cell line.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.



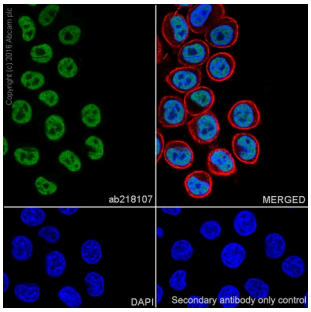
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

AP2 gamma/TFAP2C Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Immunohistochemical analysis of paraffin-embedded human breast cancer tissue labeling AP2 gamma/TFAP2C with ab218107 at 1/2000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.
Almost all tumor cells show negative staining on moderately differentiated human breast cancer. The data is consistent with the literature (PMID: 18825690).

Counter stained with Hematoxylin.

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



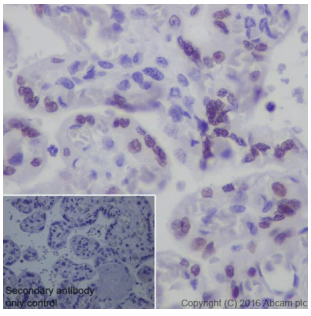
Immunocytochemistry/ Immunofluorescence - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

AP2 gamma/TFAP2C Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized SK-BR-3 (Human mammary gland adenocarcinoma cell line) cells labeling AP2 gamma/TFAP2C with ab218107 at 1/500 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing nuclear staining on SK-BR-3 cell line.

The nuclear counterstain is DAPI (blue). Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

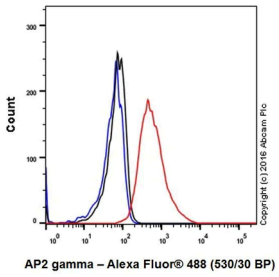
AP2 gamma/TFAP2C Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Immunohistochemical analysis of paraffin-embedded human placenta tissue labeling AP2 gamma/TFAP2C with ab218107 at 1/2000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.
Nuclear staining on human placenta 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) Ready to use.

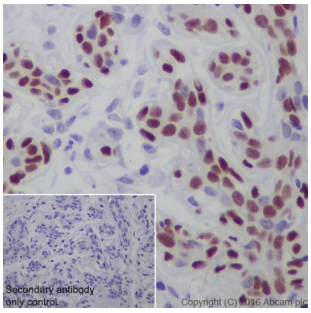
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

AP2 gamma/TFAP2C Flow Cytometry (Intracellular) staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed SK-BR-3 (Human mammary gland adenocarcinoma cell line) cells labeling AP2 gamma/TFAP2Cwith ab218107 at 1/50 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

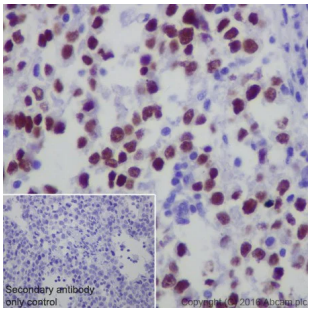
AP2 gamma/TFAP2C Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Immunohistochemical analysis of paraffin-embedded human breast tissue labeling AP2 gamma/TFAP2C with ab218107 at 1/2000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.
Nuclear staining on human normal breast 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) Ready to use.

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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

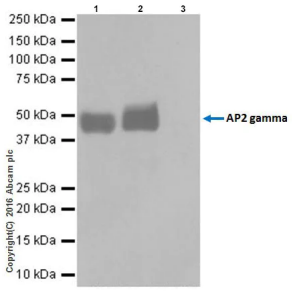
AP2 gamma/TFAP2C Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Immunohistochemical analysis of paraffin-embedded human seminoma tissue labeling AP2 gamma/TFAP2C with ab218107 at 1/2000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.
Nucleus staining on human seminoma 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) Ready to use.

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



Immunoprecipitation - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

AP2 gamma/TFAP2C was immunoprecipitated from 0.35 mg of MCF7 (Human breast adenocarcinoma cell line) whole cell lysate with ab218107 at 1/30 dilution.
Western blot was performed from the immunoprecipitate using ab218107 at 1/1000 dilution.

VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.

Lane 1: MCF7 whole cell lysate, 10 µg (Input).

Lane 2: ab218107 IP in MCF7 whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab2018107 in MCF7 whole cell lysate.

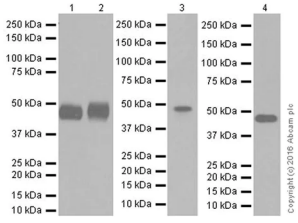
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds.

All lanes:
Immunoprecipitation - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

Predicted band size: 49 kDa

Observed band size: 49 kDa



Western blot - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107)

AP2 gamma/TFAP2C Western blot staining using rabbit Anti-AP2 gamma/TFAP2C antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1/2: 30 seconds; Lane 3: 10 seconds; Lane 4: 3 minutes.

Lanes 1 - 2:
Western blot - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107) at 1/1000 dilution

Lanes 3 - 4:
Western blot - Anti-AP2 gamma/TFAP2C antibody [EPR20331] (ab218107) at 1/2000 dilution

Lane 1:
SK-BR-3 (Human mammary gland adenocarcinoma cell line) whole cell lysate at 10 µg

Lane 2:
MDA-MB-435S (Human ductal carcinoma cell line) whole cell lysate at 10 µg

Lane 3:
MCF7 (Human breast adenocarcinoma cell line) whole cell lysate at 10 µg

Lane 4:
T-47D (Human ductal breast epithelial tumor cell line) whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 49 kDa

Observed band size: 49 kDa

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