abcam

ab279342

Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR22714-2
Purification technique	Affinity purification Protein A
Concentration	0.987 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human, Rat, Mouse
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	-
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)

Species	Rat
Dilution info	-
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information FOXP4

Function	Transcriptional repressor that represses lung-specific expression.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab279342 is the carrier-free version of ab242127.

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.

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	FOXP4 also known as Forkhead Box P4 is a transcription factor belonging to the FOX protein family. Its molecular mass approximately 80 kDa. It is expressed in various tissues with high expression levels observed in lung kidney and prostate.

	The protein binds to DNA and regulates the transcription of genes involved in development and differentiation.
Biological function summary	FOXP4 plays an important role in regulating developmental processes particularly in the central nervous system and lung tissue. It often functions as part of a complex that includes other FOXP proteins like FOXP1 and FOXP2 which share a conserved DNA-binding forkhead domain. These proteins collaborate to regulate genes important for cell differentiation and organogenesis.
Pathways	The transcriptional activity of FOXP4 integrates into significant signaling pathways such as the Wnt signaling and TGF-beta pathways. These pathways govern processes like cellular growth and differentiation. FOXP4 interacts with other FOX proteins including FOXP1 to modulate gene expression patterns important for these pathways.
Associated diseases and disorders	Research indicates that FOXP4 is associated with lung cancer and neurodevelopmental disorders. Its dysregulation can affect cellular processes linked to tumorigenesis and cognitive development. FOXP4's involvement with other proteins such as FOXP1 highlights its role in modulating gene networks that when disrupted can contribute to disease pathogenesis.

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

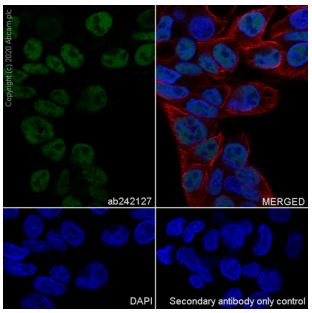
We do not recommend this combination. It is not covered by our product promise.

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.

11 product images

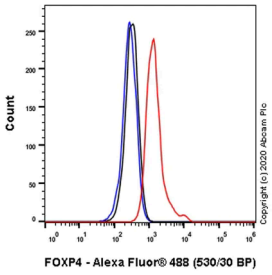


Immunocytochemistry/ Immunofluorescence - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

FOXP4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-FOXP4 antibody

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HepG2 cells labelling FOXP4 with ab242127 at 1/500 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in HepG2 cells. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

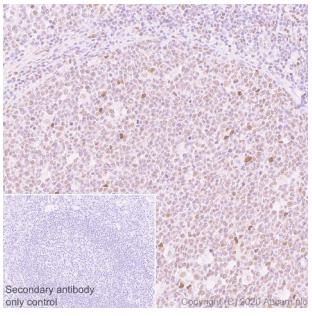
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

FOXP4 Flow Cytometry (Intracellular) staining using rabbit Anti-FOXP4 antibody

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) cells labelling FOXP4 with ab242127 at 1/50 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



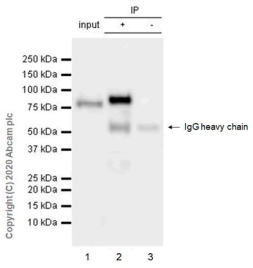
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

FOXP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXP4 antibody

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling FOXP4 with ab242127 at 1/4000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on human tonsil. The section was incubated with ab242127 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 a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

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



Immunoprecipitation - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
FOXP4 was immunoprecipitated from 0.35 mg HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate with ab242127 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab242127 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate 10 ug

Lane 2: ab242127 IP in HepG2 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab242127 in HepG2 whole cell lysate

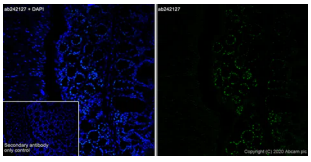
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 8 seconds

All lanes:
Immunoprecipitation - Anti-FOXP4 antibody [EPR22714-2] (ab242127)

Predicted band size: 73 kDa

Observed band size: 80 kDa



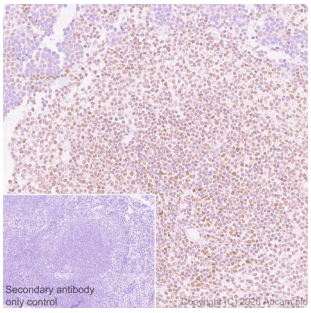
Immunohistochemistry (Frozen sections) - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

FOXP4 Immunohistochemistry (Frozen sections) staining using rabbit Anti-FOXP4 antibody

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse colon tissue labeling FOXP4 with ab242127 at 1/1000 dilution followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution (Green). Nuclear staining on mouse colon is observed. The nuclear counterstain was DAPI (Blue).

Secondary antibody control: Secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

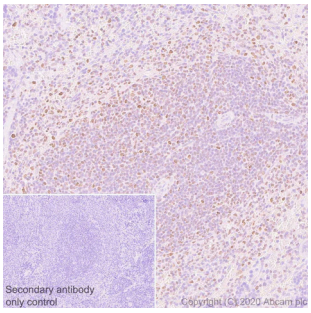


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling FOXP4 with ab242127 at 1/4000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on mouse spleen. The section was incubated with ab242127 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 a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

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



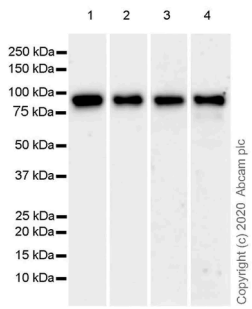
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

FOXP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXP4 antibody

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Rat spleen tissue labeling FOXP4 with ab242127 at 1/4000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on rat spleen. The section was incubated with ab242127 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 a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

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



Western blot - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

FOXP4 Western blot staining using rabbit Anti-FOXP4 antibody

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Lysates were made freshly and used in WB immediately to minimize protein degradation.

Exposure time: Lanes 1-2: 59 seconds; Lanes 3-4: 3 minutes.

All lanes:
Western blot - Anti-FOXP4 antibody [EPR22714-2] (ab242127) at 1/1000 dilution

Lane 1:
HepG2 (human hepatocellar carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
Caco-2 (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

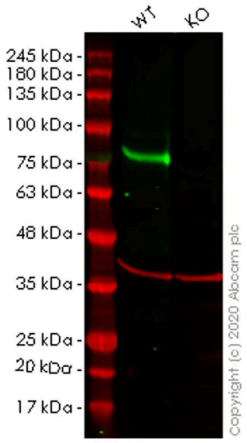
Lane 4:
Hepa1-6 (mouse hepatoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 73 kDa

Observed band size: 80 kDa



Western blot - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

FOXP4 Western blot staining using rabbit Anti-FOXP4 antibody

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

The lysates were kindly provided by our collaborator Dr. Bin Zhao, Zhejiang University.

Lanes 1-2: Merged signal (red and green). Green - ab242127 observed at 80 kDa. Red - loading control ab8245 (Mouse monoclonal [6C5] to GAPDH) observed at 36 kDa.

Lanes 1-2: ab242127 Anti-FOXP4 antibody [EPR22714-2] was shown to react with FOXP4 in HepG2 cells in Western blot. Loss of signal was observed when FOXP4 knockout sample was used. Wild-type and FOXP4 knockout samples were subjected to SDS-PAGE. ab242127 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated at 4°C overnight at 1 in 1000 dilution and 1 in 10000 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 10000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-FOXP4 antibody [EPR22714-2] (ab242127) at 1/1000 dilution

Lane 1:
HepG2 (human hepatocellar carcinoma epithelial cell) whole cell lysate at 10 µg

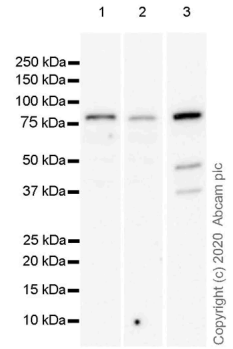
Lane 2:
FOXP4 knock out HepG2 whole cell lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG H&L (IRDye® 800CW) (ab216773) and Goat Anti-Mouse IgG H&L (IRDye® 680RD) (ab216776) at 1/10000 dilution

Predicted band size: 73 kDa

Observed band size: 80 kDa



Western blot - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Bands around 50 kDa and 37 kDa in lane3 are caused by degradation.

Exposure time: 3 minutes

All lanes:
Western blot - Anti-FOXP4 antibody [EPR22714-2] (ab242127) at 1/1000 dilution

Lane 1:
Human colon tissue lysate at 20 µg

Lane 2:
Human tonsil tissue lysate at 20 µg

Lane 3:
Rat spleen tissue lysate at 20 µg

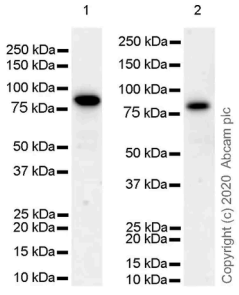
Secondary

Lanes 1 - 2:
VeriBlot for IP secondary antibody(HRP)(ab131366) at 1/1000 dilution

Lane 3:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 73 kDa

Observed band size: 80 kDa



Western blot - Anti-FOXP4 antibody [EPR22714-2] - BSA and Azide free (ab279342)

This data was developed using ab242127, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Lysates were made freshly and used in WB immediately to minimize protein degradation.

Exposure time: 3 minutes

All lanes:
Western blot - Anti-FOXP4 antibody [EPR22714-2] (ab242127) at 1/1000 dilution

Lane 1:
4T1 (mouse mammary gland carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
PC-12 (rat adrenal gland pheochromocytoma) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 73 kDa

Observed band size: 80 kDa

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