abcam

ab227649

Anti-FOXP1 antibody [SP133] - C-terminal

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.6 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	SP133
Purification technique	Affinity purification Protein A/G
Concentration	0.202 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/100
Notes	Primary antibody incubation for 10 minutes at room temperature.

Species	Rat
Dilution info	1/100
Notes	Primary antibody incubation for 10 minutes at room temperature.

Species	Human
Dilution info	1/100
Notes	Primary antibody incubation for 10 minutes at room temperature.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	Primary antibody incubation for 30 minutes at 4°C.

Expected

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

WB

Tested

Species	Human
Dilution info	1/25 - 1/500
Notes	Primary antibody incubation for 1 hour at room temperature.

Expected

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

IHC-Fr

Tested

Species	Rat
Dilution info	1/25
Notes	-

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Expected

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

Target data

See full target information FOXP1

Function Transcriptional repressor (PubMed:18347093, PubMed:26647308). Can act with CTBP1 to synergistically repress transcription but CTPBP1 is not essential (By similarity). Plays an important role in the specification and differentiation of lung epithelium. Acts cooperatively with FOXP4 to regulate lung secretory epithelial cell fate and regeneration by restricting the goblet cell lineage program; the function may involve regulation of AGR2. Essential transcriptional regulator of B-cell development. Involved in regulation of cardiac muscle cell proliferation. Involved

in the columnar organization of spinal motor neurons. Promotes the formation of the lateral motor neuron column (LMC) and the preganglionic motor column (PGC) and is required for respective appropriate motor axon projections. The segment-appropriate generation of spinal cord motor columns requires cooperation with other Hox proteins. Can regulate PITX3 promoter activity; may promote midbrain identity in embryonic stem cell-derived dopamine neurons by regulating PITX3. Negatively regulates the differentiation of T follicular helper cells T(FH)s. Involved in maintenance of hair follicle stem cell quiescence; the function probably involves regulation of FGF18 (By similarity). Represses transcription of various pro-apoptotic genes and cooperates with NF-kappa B-signaling in promoting B-cell expansion by inhibition of caspase-dependent apoptosis (PubMed:25267198). Binds to CSF1R promoter elements and is involved in regulation of monocyte differentiation and macrophage functions; repression of CSF1R in monocytes seems to involve NCOR2 as corepressor (PubMed:15286807, PubMed:18347093, PubMed:18799727). Involved in endothelial cell proliferation, tube formation and migration indicative for a role in angiogenesis; the role in neovascularization seems to implicate suppression of SEMA5B (PubMed:24023716). Can negatively regulate androgen receptor signaling (PubMed:18640093). Acts as a transcriptional activator of the FBXL7 promoter; this activity is regulated by AURKA (PubMed:28218735). Isoform 8. Involved in transcriptional regulation in embryonic stem cells (ESCs). Stimulates expression of transcription factors that are required for pluripotency and decreases expression of differentiation-associated genes. Has distinct DNA-binding specifities as compared to the canonical form and preferentially binds DNA with the sequence 5'-CGATACAA-3' (or closely related sequences) (PubMed:21924763). Promotes ESC self-renewal and pluripotency (By similarity).

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

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	FOXP1 also known as forkhead box P1 is a transcription factor that belongs to the forkhead box (FOX) family. This protein weighs approximately 75-80 kDa and is expressed in a variety of tissues including the brain heart and lung. It plays a role in regulating gene expression acting as a transcriptional repressor or activator depending on the context. FOXP1 modulates several developmental processes through its interaction with DNA influencing cellular differentiation and proliferation. Its activity is vital in embryonic development and in maintaining the function of certain adult tissues.
Biological function summary	This transcription factor functions in the regulation of gene expression associated with neurodevelopment cardiac growth and immune responses. FOXP1 often forms a complex with other transcription factors such as FOXP2 and FOXP4 which enhances its regulatory roles. These interactions allow it to control various genetic programs that are important in the maturation and specification of different cell types. Moreover FOXP1 contributes to the modulation of B-cell development and function highlighting its importance in immune system regulation.
Pathways	FOXP1 takes part in several key signaling pathways including the Wnt signaling pathway and the TGF-beta pathway. The Wnt signaling pathway relates FOXP1 to β-catenin influencing the expression of genes involved in cell proliferation and differentiation. In the TGF-beta pathway its interactions with SMAD proteins underline its function in cellular processes such as apoptosis and epithelial–mesenchymal transition. These pathways emphasize FOXP1's contribution to controlling cell growth and development across different biological contexts.
Associated diseases and disorders	Disruptions in the function of this transcription factor have been linked to conditions like intellectual disability and certain types of cancer including lymphoma. The relationship between FOXP1 and proteins such as BCL2 in lymphoma highlights its role in tumorigenesis and progression. Additionally mutations affecting FOXP1 can disturb its interaction with other forkhead family proteins leading to neurodevelopmental disorders that impact cognitive abilities and behavior. Understanding these connections provides insights into how FOXP1's altered activity can contribute to disease pathology.

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.

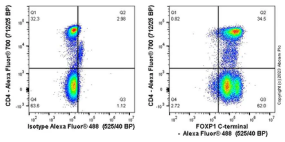
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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



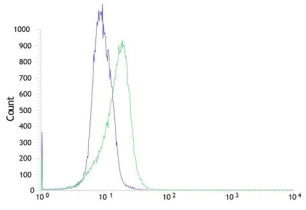
Flow Cytometry (Intracellular) - Anti-FOXP1 antibody [SP133] - C-terminal (ab227649)

FOXP1 Flow Cytometry (Intracellular) staining using rabbit Anti-FOXP1 antibody

Flow cytometry staining of human peripheral blood mononuclear cells (PBMCs) with ab227649 (right) or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (left). Cells were fixed and permeabilised with BD Cytofix/Cytoperm™ for 20 min. PBMCs were incubated for 30 min at 4°C in 1x PBS containing 10 µg/ml human IgG and 10 % normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab227649 or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (1x 106 in 100 µl at 0.2 µg/ml (1/10050)) for 30 min at 4°C . The cells were simultaneously stained with CD4.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 4°C

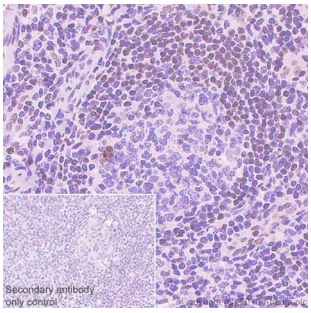
Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter. Events were gated on viable cells.



Flow Cytometry (Intracellular) - Anti-FOXP1 antibody [SP133] - C-terminal (ab227649)

FOXP1 Flow Cytometry (Intracellular) staining using rabbit Anti-FOXP1 antibody

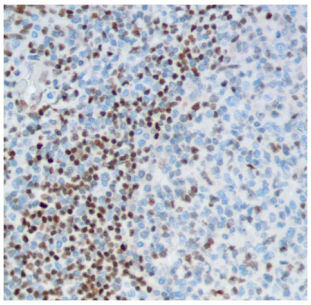
Flow cytometric analysis of MOLT-4 (human lymphoblastic leukemia cell line) cell line labeling FOXP1 with ab227649 at 1/100 dilution (green) compared with a negative control of rabbit IgG (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXP1 antibody [SP133] - C-terminal (ab227649)

FOXP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXP1 antibody

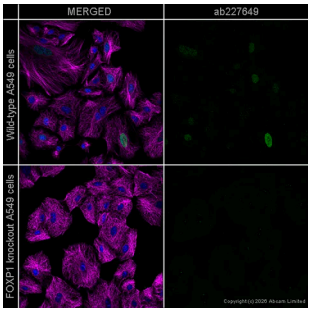
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human tonsil tissue sections labeling FOXP1 with ab227649 at 1/100 dilution (2.40 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. 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-FOXP1 antibody [SP133] - C-terminal (ab227649)

FOXP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXP1 antibody

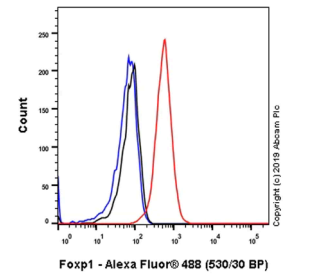
Formalin-fixed, paraffin-embedded human tonsil tissue stained for FOXP1 using ab227649 at 1/100 dilution in immunohistochemical analysis.



Immunocytochemistry/ Immunofluorescence - Anti-FOXP1 antibody [SP133] - C-terminal (ab227649)

FOXP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-FOXP1 antibody

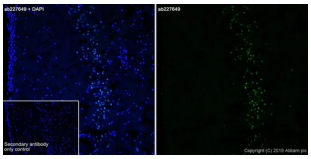
ab227649 staining FOXP1 in A549 (positive) and A549-FOXP1 (negative) cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated for 2 hours at room temperature with ab227649 at 1ug/ml (shown in green) and ab7291, Anti-alpha Tubulin antibody [DM1A] - Loading Control (shown in pseudocolour magenta). Cells were then incubated with ab150081, Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution and ab150119, Goat Anti-Mouse IgG H&L (Alexa Fluor® 647) preadsorbed at 1/1000 dilution for 1 hour at room temperature. Nuclear DNA was labeled with DAPI (shown in blue). Also suitable in cells fixed with 4% paraformaldehyde (10 min). Image was acquired with a high-content analyser (Operetta CLS, Revvity) and a maximum intensity projection of confocal sections is shown.



Flow Cytometry (Intracellular) - Anti-FOXP1 antibody [SP133] - C-terminal (ab227649)

FOXP1 Flow Cytometry (Intracellular) staining using rabbit Anti-FOXP1 antibody

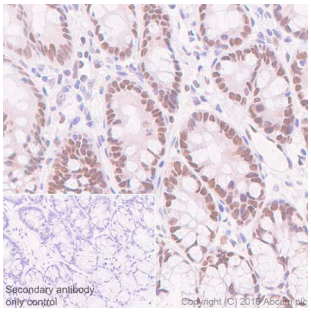
Flow cytometry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) labeling FOXP1 with purified ab227649 at 1/20 dilution (12 µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as a secondary antibody. Isotype control -Rabbit monoclonal IgG (ab172730) / Black. Unlableled control -Unlabelled cells / blue.



Immunohistochemistry (Frozen sections) - Anti-FOXP1 antibody [SP133] - C-terminal (ab227649)

FOXP1 Immunohistochemistry (Frozen sections) staining using rabbit Anti-FOXP1 antibody

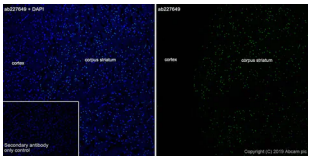
Immunohistochemistry (Frozen) analysis of rat cerebral cortex tissue section labeling FOXP1 with purified ab227649 at 1/25 (9.6 µg/ml). Sections were fixed in 4% paraformaldehyde and permeabilized with 0.2% Triton X-100. Antigen retrieval was Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI 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-FOXP1 antibody [SP133] - C-terminal (ab227649)

FOXP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXP1 antibody

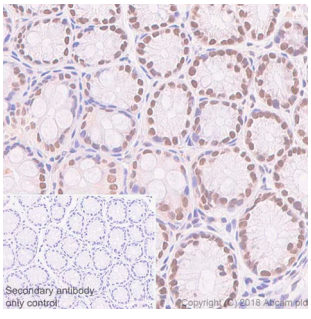
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat colon tissue sections labeling FOXP1 with ab227649 at 1/400 dilution (0.60 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. 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 (Frozen sections) - Anti-FOXP1 antibody [SP133] - C-terminal (ab227649)

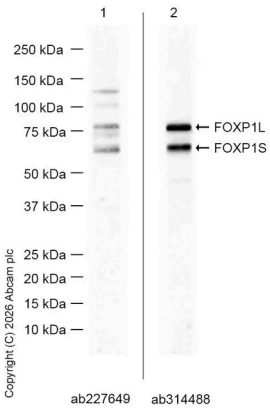
FOXP1 Immunohistochemistry (Frozen sections) staining using rabbit Anti-FOXP1 antibody

Immunohistochemistry (Frozen) analysis of rat cerebrum tissue section labeling FOXP1 with purified ab227649 at 1/25 (9.6 µg/ml). Sections were fixed in 4% paraformaldehyde and permeabilized with 0.2% Triton X-100. Antigen retrieval was Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI 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-FOXP1 antibody [SP133] - C-terminal (ab227649)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse colon tissue sections labeling FOXP1 with ab227649 at 1/400 dilution (0.60 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. 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-FOXP1 antibody [SP133] - C-terminal (ab227649)

FOXP1 Western blot staining of HEK 293 (human embryonic kidney epithelial cell) whole cell lysate using rabbit Anti-FOXP1 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Lysate was freshly made and used for Western blotting immediately to minimize protein degradation.

ab227649 is less sensitive than ab314488 in WB. We recommend using ab314488 for WB testing.

All lanes:
Western blot - Anti-FOXP1 antibody [EPR26484-79] (ab314488) at 1/1000 dilution

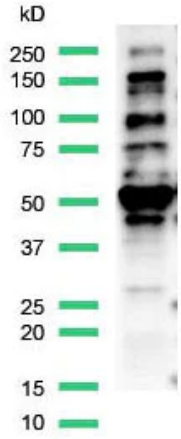
All lanes:
HEK 293 (human embryonic kidney epithelial cell) whole cell lysate at 20 µg with NFDM/TBST

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/20000 dilution

Observed band size: 90 kDa, 70 kDa

Exposure time: 180s



Western blot - Anti-FOXP1 antibody [SP133] - C-terminal (ab227649)

All lanes:
Western blot - Anti-FOXP1 antibody [SP133] - C-terminal (ab227649) at 1/25 dilution

All lanes:
MCF7 (human breast adenocarcinoma cell line) cell lysate

Predicted band size: 75 kDa

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