abcam

ab242429

Anti-PAX8 antibody [SP348] - BSA and Azide free

Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429) is a rabbit recombinant monoclonal antibody provided in a PBS only buffer for easy conjugation detecting PAX8 in **Western Blot, Flow Cytometry, IHC-P, ICC/IF, mIHC**. Suitable for **Human**.

- BSA, sodium azide, and glycerol-free for easy conjugation
- Multiplex IHC validated on the Leica BOND® MAX using Opal reagents
- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | Advanced Validation

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	SP348
Purification technique	Affinity purification Protein A
Concentration	1.029 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

mIHC

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat, Dog
Dilution info	-
Notes	-

Flow Cyt

Tested

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

Predicted

Species	Mouse, Rat, Dog
Dilution info	-
Notes	-

WB

Expected

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

Predicted

Species	Mouse, Rat, Dog
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Primary antibody incubation for 10 minutes at room temperature. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat, Dog
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat, Dog
Dilution info	-
Notes	-

ChIC/CUT&RUN-seq

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat, Dog
Dilution info	-
Notes	-

Target data

See full target information PAX8

Function	Transcription factor for the thyroid-specific expression of the genes exclusively expressed in the thyroid cell type, maintaining the functional differentiation of such cells.

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

What is this antibody validated in?
Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), Multiplex IHC (mIHC) in Human samples.

What is the molecular weight of PAX8?
Anti-PAX8 [SP348] - BSA and Azide free (ab242429) specifically detects a band for PAX8 (UniProt: Q06710) at a molecular weight of 48kDa.

Collaboration

Anti-PAX8 [SP348] - BSA and Azide free (ab242429) is a clone from the portfolio of Spring Bioscience (Roche) SP clones which have been optimised for immunohistochemistry (IHC).

Other related products
We have a range of other formats of antibody clone [SP348] also available for your convenience: ab227707, Carrier free - ab242429, Alexa Fluor® 647 - ab313345

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	PAX8 also known as 3a8 is a transcription factor with a molecular mass of approximately 48 kDa. It belongs to the paired box (PAX) family of proteins which are characterized by a specific DNA-binding domain. PAX8 plays an important role in organ development and cellular differentiation. This protein is mainly expressed in the thyroid kidneys and Mьllerian-derived tissues. Researchers often detect PAX8 using immunohistochemistry (PAX8 IHC) techniques due to its tissue-specific expression patterns.
Biological function summary	The PAX8 protein regulates the expression of genes related to organogenesis and cell fate determination. It forms part of transcriptional regulatory complexes partnering with other proteins to modulate gene activity. PAX8 supports embryonic development especially in the thyroid and urogenital tract. Its presence ensures the proper function and formation of these organs highlighting its significance in developmental biology.
Pathways	PAX8 interacts with several key biological processes. It notably participates in the thyroid hormone synthesis pathway where it regulates the expression of thyroglobulin and thyroperoxidase. PAX8 also affects the renal system through its

	interaction with WT1 a protein involved in kidney development. These pathways illustrate PAX8's role in maintaining endocrine and renal functions by influencing important protein interactions.
Associated diseases and disorders	PAX8 mutations and dysregulation connect to conditions like congenital hypothyroidism and renal agenesis. In congenital hypothyroidism defects in PAX8 lead to impaired thyroid development affecting hormone production. Moreover its interaction with BCL2 an important apoptosis regulator relates to certain cancers such as ovarian carcinoma. The misregulation of PAX8 increases the risk and progression of these disorders by disrupting normal physiological processes.

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

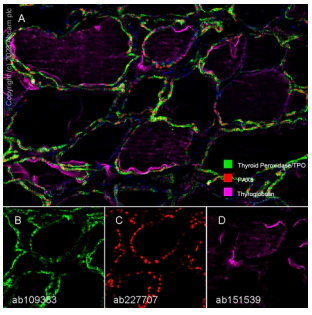
We do not recommend this combination. It is not covered by our product promise.

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.

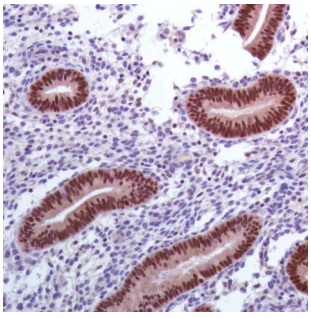
16 product images



Multiplex immunohistochemistry - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

Fluorescence multiplex immunohistochemical analysis of Human thyroid gland tissue (Formalin/PFA-fixed paraffin-embedded sections). Panel A: merged staining of anti-Thyroglobulin (ab151539, magenta; Opal™690), anti-Thyroid Peroxidase/TPO (ab109383, green; Opal™520) and anti-PAX8 (ab227707, red; Opal™570) on human thyroid gland. Panel B: anti-Thyroid Peroxidase/TPO stained on cytoplasm of follicular epithelial cells. Panel C: anti-PAX8 stained on

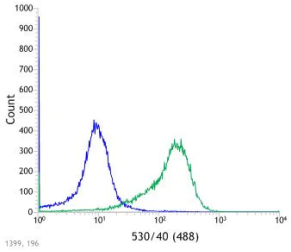
nucleus of follicular epithelial cells. Panel D: anti-Thyroglobulin stained on colloid. Opal Polymer HRP Ms + Rb was used as a secondary antibody. The section was incubated in three rounds of staining: in the order of ab151539 at 1/5000 dilution (0.167 µg/ml), ab109383 at 1/1500 dilution (0.072 µg/ml) , and ab227707 at 1/200 dilution (5.22 µg/ml) 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. DAPI (blue) was used as a nuclear counter stain. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAX8 antibody

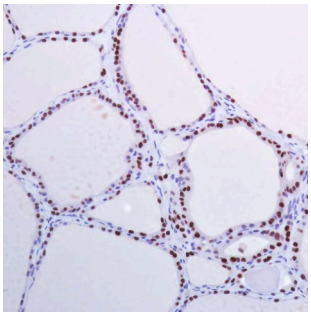
Formalin-fixed, paraffin-embedded human uterus tissue stained for PAX8 using ab227707 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).



Flow Cytometry - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Flow Cytometry staining using rabbit Anti-PAX8 antibody

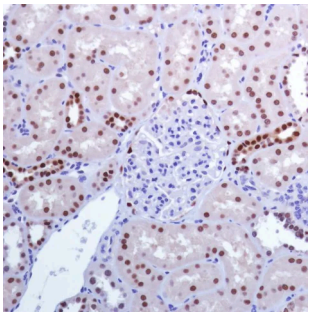
Flow Cytometry analysis of HL-60 (human promyelocytic leukemia cell line) cells, labeling PAX8 with ab227707 at 1/100 dilution (green) compared to a Rabbit IgG negative control (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAX8 antibody

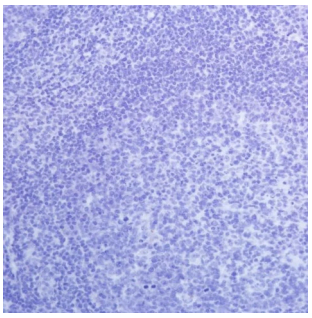
Formalin-fixed, paraffin-embedded human thyroid tissue stained for PAX8 using ab227707 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAX8 antibody

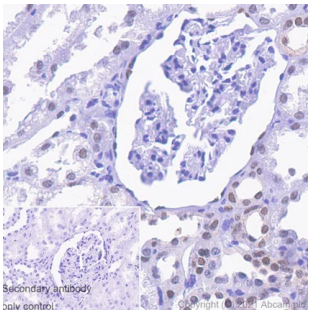
Formalin-fixed, paraffin-embedded human kidney tissue stained for PAX8 using ab227707 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAX8 antibody

Formalin-fixed, paraffin-embedded human tonsil tissue stained for PAX8 using ab227707 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).



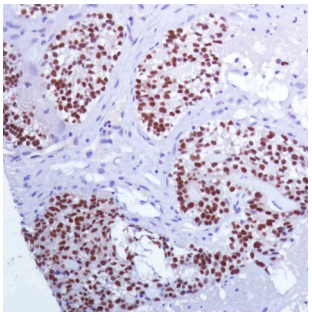
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human kidney using rabbit Anti-PAX8 antibody

This data was developed using ab227707, the same antibody clone in a different buffer formulation.

Formalin-fixed, paraffin-embedded human kidney tissue stained for PAX8 using ab227707 at 1/100 dilution in immunohistochemical analysis. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 10 mins.

The section is incubated with ab227707 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

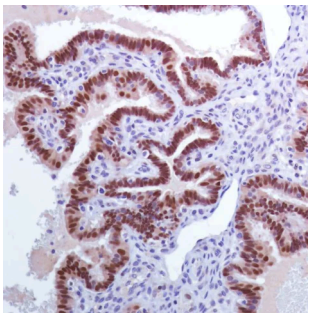


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAX8 antibody

Formalin-fixed, paraffin-embedded human ovarian adenocarcinoma tissue stained for PAX8 using ab227707 at 1/100 dilution in immunohistochemical analysis.

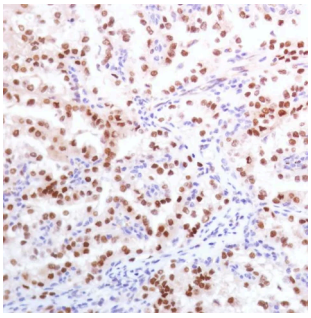
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAX8 antibody

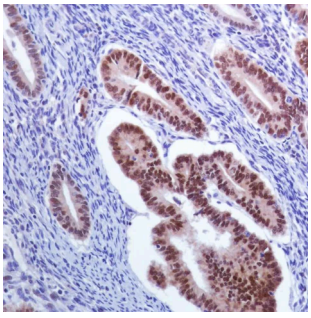
Formalin-fixed, paraffin-embedded human fallopian tube tissue stained for PAX8 using ab227707 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAX8 antibody

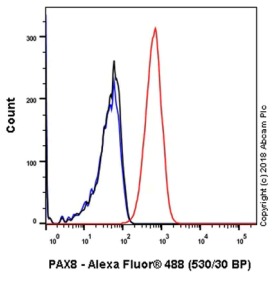
Formalin-fixed, paraffin-embedded human renal cell carcinoma tissue stained for PAX8 using ab227707 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAX8 antibody

Formalin-fixed, paraffin-embedded human endometrial adenocarcinoma tissue stained for PAX8 using ab227707 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227707).

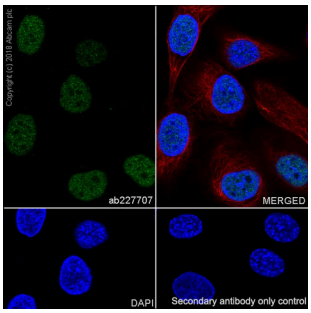


Flow Cytometry - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

PAX8 Flow Cytometry staining using rabbit Anti-PAX8 antibody

Flow Cytometry analysis of SK-OV-3 (human ovarian cancer epithelial cell) cells labeling PAX8 with purified ab227707 at 1:400 dilution (1.015 µg/ml) - Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) secondary antibody was used at 1:2000 dilution. Isotype control - Rabbit monoclonal IgG (ab172730) - Black. Unlabeled

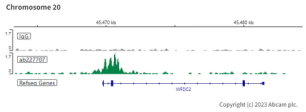
control - Blue.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab242429)



Immunocytochemistry/ Immunofluorescence - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

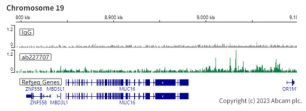
PAX8 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PAX8 antibody

Immunocytochemistry/ Immunofluorescence analysis of SK-OV-3 (human ovarian cancer epithelial cell) cells labeling PAX8 with purified ab227707 at 1:50 (8.1 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab242429)



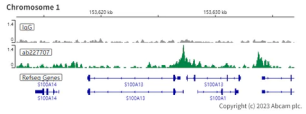
ChIC/CUT&RUN sequencing - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

"This data was developed using the same antibody clone in a different buffer formulation (ab227707). ChIC/CUT&RUN was performed using a pAG-MNase at a final concentration of 700 ng/mL, 2.5 x 10^5 NIH:OVCAR-3 (Human ovary adenocarcinoma epithelial cell) cells and 5 µg of ab227707 [SP348]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control ab172730 is also shown. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods."



ChIC/CUT&RUN sequencing - Anti-PAX8 antibody [SP348] - BSA and Azide free (ab242429)

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