

Anti-FOXA2 antibody [EPR4466]

Anti-FOXA2 antibody [EPR4466] (ab108422) is a rabbit monoclonal antibody detecting FOXA2 in **Western Blot, IHC-P, ICC/IF**. Suitable for **Human, Mouse**.

- Clone EPR4466 is the most cited clone to FOXA2
- Biophysical QC for unrivalled batch-batch consistency
- Over 100 publications

Recombinant

RabMAb

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	EPR4466
Purification technique	Affinity purification Protein A
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/500 - 1/1000
Notes	For unpurified use at 1/250 - 1/500. Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Species	Human
Dilution info	1/500 - 1/1000
Notes	For unpurified use at 1/250 - 1/500. Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	For unpurified use at 1/1000 - 1/10000.

Species	Human
Dilution info	1/1000
Notes	For unpurified use at 1/1000 - 1/10000.

Predicted

Species	Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/300
Notes	For unpurified use at 1/250 - 1/500.

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

[See full target information FOXA2](#) 

Function

Transcription factor that is involved in embryonic development, establishment of tissue-specific gene expression and regulation of gene expression in differentiated tissues. Is thought to act as a 'pioneer' factor opening the compacted chromatin for other proteins through interactions with nucleosomal core histones and thereby replacing linker histones at target enhancer and/or promoter sites. Binds DNA with the consensus sequence 5'-[AC]A[AT]T[AG]TT[GT][AG][CT]T[CT]-3' (By similarity). In embryonic development is required for notochord formation. Involved in the development of multiple endoderm-derived organ systems such as the liver, pancreas and lungs; FOXA1 and FOXA2 seem to have at least in part redundant roles. Originally described as a transcription activator for a number of liver genes such as AFP, albumin, tyrosine aminotransferase, PEPCK, etc. Interacts with the cis-acting regulatory regions of these genes. Involved in glucose homeostasis; regulates the expression of genes important for glucose sensing in pancreatic beta-cells and glucose homeostasis. Involved in regulation of fat metabolism. Binds to fibrinogen beta promoter and is involved in IL6-induced fibrinogen beta transcriptional activation.

Storage

Shipped at conditions	Blue Ice
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	Stable for 12 months at -20°C

Notes

Anti-FOXA2 antibody [EPR4466] (ab108422) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in ICC/IF, IHC-P, WB in human, mouse samples.

Anti-FOXA2 antibody [EPR4466] (ab108422) has been cited over 104 times in peer reviewed journals and is trusted by the scientific community.

Abcams high quality manufacturing and validation processes ensure Anti-FOXA2 antibody [EPR4466] (ab108422) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.

Anti-FOXA2 antibody [EPR4466] (ab108422) has 11 independent reviews from customers.

Anti-FOXA2 antibody [EPR4466] (ab108422) specifically detects FOXA2 (UniProt ID: Q9Y261; Molecular weight: 48kDa) and is sold in 100 uL and 1 mL selling sizes.

Conjugation-ready, carrier free format available for antibody clone EPR4466 - ab2281.

Antibody clone EPR4466 is also available pre-conjugated to a variety of labels for your convenience - Alexa Fluor® 488, Alexa Fluor® 647, HRP, Alexa Fluor® 594, Alexa Fluor® 568, Alexa Fluor® 555, Alexa Fluor® 75 (ab193864, ab193879, ab19388, ab311752, ab31332, ab313233, ab3292).

FOXA2 is a pivotal transcription factor involved in the regulation of liver development and lung development. Research has shown that FOXA2 plays a significant role in various cancers, including liver and lung cancers. Understanding FOXA2's function can provide insights into developmental biology and potential therapeutic targets for cancer treatment.

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	FOXA2 also known as HNF3B is a transcription factor that plays a significant role in gene regulation. This protein has a mass of approximately 47 kDa and is expressed in various tissues including the liver pancreas and lung. Researchers detect FOXA2 using techniques like ELISA for protein quantification. Its function involves regulating the expression of genes critical for development and metabolism.
Biological function summary	FOXA2 influences important processes in embryonic development and organogenesis. It does not typically act as part of a larger complex but independently binds to DNA enabling the transcription of target genes. FOXA2 affects liver function by regulating genes involved in glucose and lipid metabolism and it also plays a part in the differentiation of cells in development stages.
Pathways	FOXA2 operates within pathways like the insulin signaling pathway and the Wnt signaling pathway. It collaborates with other transcription factors like FOXA1 and FOXA3 to maintain metabolic homeostasis. In the Wnt pathway FOXA2 impacts cell fate decisions essential for embryonic patterning and development.
Associated diseases and disorders	Alterations in FOXA2 expression have connections to conditions such as diabetes and liver diseases. Changes in FOXA2 expression could disrupt liver metabolism leading to metabolic disorders. Moreover FOXA2 ties to the regulation of other proteins like PDX1 in the context of diabetes where it plays a role in insulin biosynthesis and pancreatic cell function.

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.

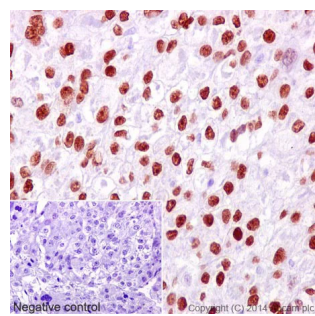
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

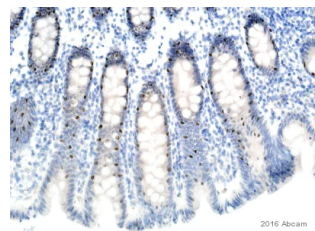
9 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXA2 antibody [EPR4466] (ab108422)

FOXA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXA2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human hepatocellular carcinoma tissue labelling FOXA2 with purified ab108422 at 1/500. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. [ab97051](#), a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

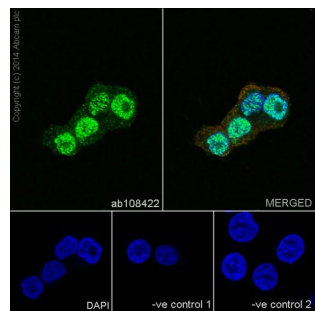


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXA2 antibody [EPR4466] (ab108422)

FOXA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXA2 antibody

Immunohistochemical analysis of Formalin/PFA-fixed paraffin-embedded human colon sections labelling FOXA2 with ab108422 at dilution of 1/500. The secondary antibody used was a polyclonal goat anti-rabbit biotin conjugated antibody at a dilution of 1/300. The sample was counterstained with hematoxylin. Antigen retrieval was heat mediated using citric acid.

This image is courtesy of Carl Hobbs, King's College London, United Kingdom



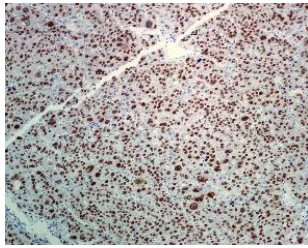
Immunocytochemistry/ Immunofluorescence - Anti-FOXA2 antibody [EPR4466] (ab108422)

FOXA2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-FOXA2 antibody

Immunocytochemistry/Immunofluorescence analysis of HT-29 cells labelling FOXA2 with purified ab108422 at 1/300. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. [ab150077](#), an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain. [ab7291](#), a mouse anti-tubulin (1/500) and [ab150120](#), an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500) were also used.

-ve control 1: primary antibody (1/300) and secondary antibody, [ab150120](#), an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

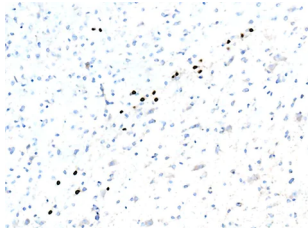
-ve control 2: [ab7291](#) (1/1000) and secondary antibody, [ab150077](#), an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXA2 antibody [EPR4466] (ab108422)

FOXA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXA2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human hepatocellular carcinoma tissue labelling FOXA2 with unpurified ab108422 at a 1/250 dilution. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

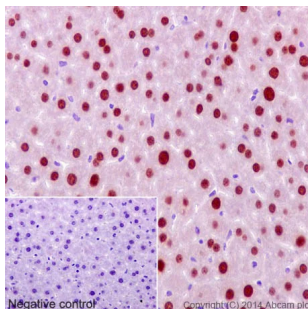


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXA2 antibody [EPR4466] (ab108422)

FOXA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXA2 antibody

ab108422 staining of FOXA2 in mouse brain (substantia nigra) tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Heat-mediated antigen retrieval was carried out using citric acid. Samples were incubated with primary antibody (1/500) for two hours at room temperature. A Biotin-conjugated goat anti-rabbit IgG polyclonal was used as the secondary antibody.

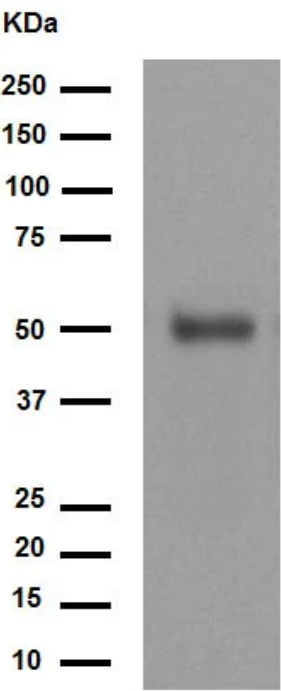
This image is courtesy of Carl Hobbs, King's College London, United Kingdom



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXA2 antibody [EPR4466] (ab108422)

FOXA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FOXA2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue labelling FOXA2 with purified ab108422 at 1/500. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. [ab97051](#), a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Western blot - Anti-FOXA2 antibody [EPR4466] (ab108422)

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

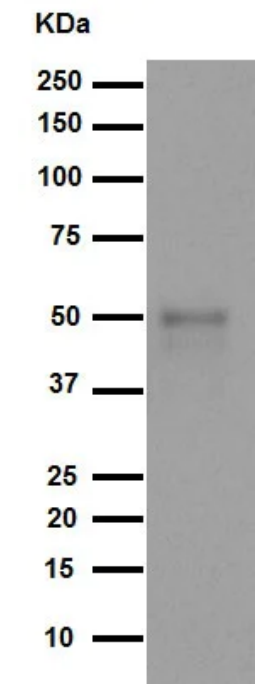
All lanes:
Western blot - Anti-FOXA2 antibody [EPR4466] (ab108422) at 1/10000 dilution

All lanes:
Human colon cancer tissue lysate at 20 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 48 kDa
Observed band size: 52 kDa



Western blot - Anti-FOXA2 antibody [EPR4466] (ab108422)

FOXA2 Western blot staining of Mouse lung tissue lysate using rabbit Anti-FOXA2 antibody

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

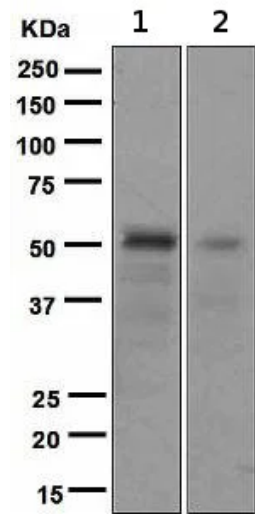
All lanes:
Western blot - Anti-FOXA2 antibody [EPR4466] (ab108422) at 1/2000 dilution

All lanes:
Mouse lung tissue lysate at 20 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 48 kDa
Observed band size: 52 kDa



Western blot - Anti-FOXA2 antibody [EPR4466] (ab108422)

All lanes:
Western blot - Anti-FOXA2 antibody [EPR4466] (ab108422) at 1/1000 dilution

Lane 1:
Human fetal colon tissue lysate at 10 µg

Lane 2:
HepG2 (human liver hepatocellular carcinoma cell line) cell lysate at 10 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG at 1/2000 dilution

Predicted band size: 48 kDa

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