abcam

Product datasheet

Anti-FOXA2 antibody [EPR4465] - ChIP Grade ab108396

Recombinant RabMAb

4 References 6 Images

Overview

Product name	Anti-FOXA2 antibody [EPR4465] - ChIP Grade
Description	Rabbit monoclonal [EPR4465] to FOXA2 - ChIP Grade
Host species	Rabbit
Tested applications	**Suitable for:** WB, ChIP, ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	HepG2 and Human colon cancer lysates.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR4465
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab108396 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 52 kDa (predicted molecular weight: 48 kDa).
ChIP		Use at an assay dependent concentration.
ICC/IF		1/300 - 1/600.

Target

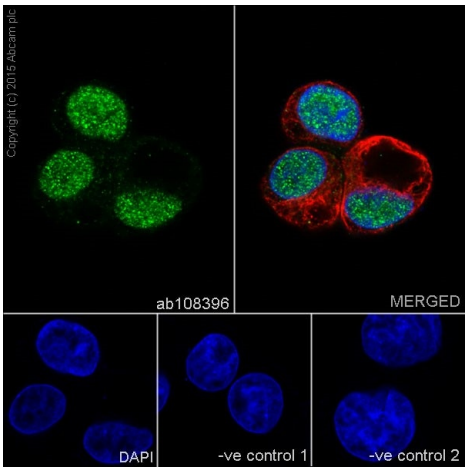
Function Transcription factor that is involved in embryonic development, establishment of tissue-specific gene expression and regulation of gene expression in differentiated tissues. Is thought to act as a 'pioneer' factor opening the compacted chromatin for other proteins through interactions with nucleosomal 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 discribed 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.

Sequence similarities Contains 1 fork-head DNA-binding domain.

Post-translational modifications Phosphorylation on Thr-156 abolishes binding to target promoters and subsequent transcription activation upon insulin stimulation.

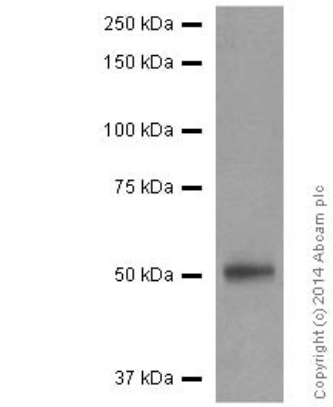
Cellular localization Nucleus. Cytoplasm. Shuttles between the nucleus and cytoplasm in a CRM1-dependent manner and in response to insulin signaling via AKT1 is exported from the nucleus.

Images



Immunocytochemistry/ Immunofluorescence - Anti-FOXA2 antibody [EPR4465] - ChIP Grade (ab108396)

Immunofluorescence staining of HepG2 cells with purified ab108396 at a working dilution of 1 in 300, counter-stained with DAPI. Tubulin was stained with mouse anti-tubulin at a dilution of 1/1000 (**ab7291**) and Alexa Fluor® 594 goat anti-mouse at a dilution of 1/500 (**ab150120**) . The secondary antibody was **ab150077** Alexa Fluor® 488 goat anti rabbit, used at a dilution of 1 in 500. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100. The negative controls are shown in the bottom middle and right hand panels - for the first negative control, purified ab108396 was used at a dilution of 1/200 followed by an Alexa Fluor® 555 goat anti-mouse antibody at a dilution of 1/500 and for the second negative control mouse primary antibody (**ab7291**) and anti-rabbit secondary antibody (**ab15007**) were used.



Western blot - Anti-FOXA2 antibody [EPR4465] - ChIP Grade (ab108396)

Anti-FOXA2 antibody [EPR4465] - ChIP Grade (ab108396) at 1/1000 dilution (purified) + HepG2 cell lysate at 10 µg

Secondary

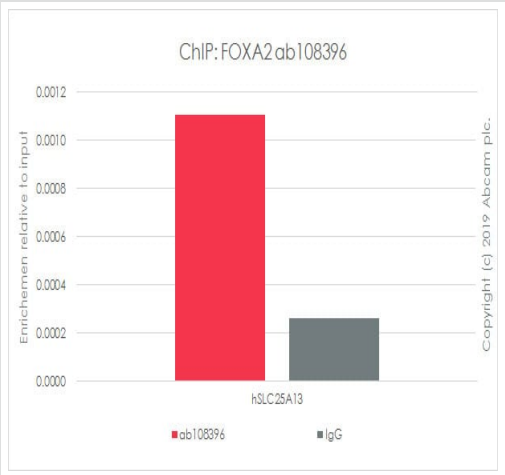
HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 48 kDa

Observed band size: 52 kDa

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST



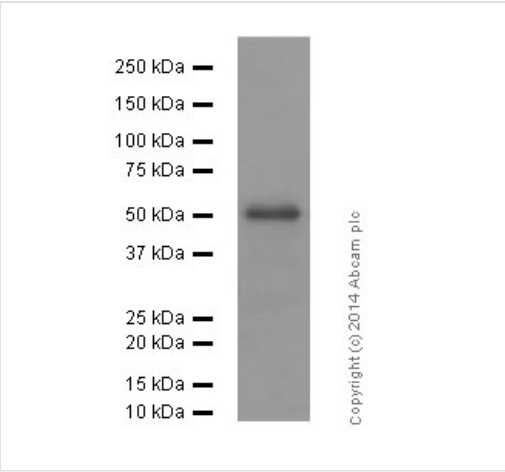
ChIP - Anti-FOXA2 antibody [EPR4465] - ChIP Grade (ab108396)

Chromatin was prepared from HepG2 cells according to the Abcam Dual X-ChIP protocol*. Cells were fixed with EGS for 30 minutes, then formaldehyde for 10 minutes.

The ChIP was performed with 25 µg of chromatin, 5 µg of ab108396 (red), and 20 µl of Protein A/G sepharose beads. 5 µg of rabbit normal IgG was added to the beads control (gray). The immunoprecipitated DNA was quantified by real time PCR (Sybr green approach).

Primers and probes are located in the first kb of the transcribed region.

*http://www.abcam.com/resources?keywords=X%20ChIP%20protocol



Western blot - Anti-FOXA2 antibody [EPR4465] - ChIP Grade (ab108396)

Anti-FOXA2 antibody [EPR4465] - ChIP Grade (ab108396) at 1/5000 dilution (purified) + SW480 cell lysate at 20 µg

Secondary

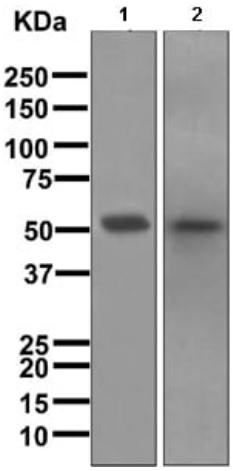
HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 48 kDa

Observed band size: 52 kDa

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST



Western blot - Anti-FOXA2 antibody [EPR4465] - ChIP Grade (ab108396)

All lanes : Anti-FOXA2 antibody [EPR4465] - ChIP Grade (ab108396) at 1/1000 dilution

Lane 1 : HepG2 lysate

Lane 2 : Human colon cancer lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 48 kDa

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