

Product datasheet

Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade ab181604

Recombinant RabMAb

★★★★★ [3 Abreviews](#) [37 References](#) [14 Images](#)

Overview

Product name	Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade
Description	Rabbit monoclonal [EPR16885] to HNF-4-alpha - ChIP Grade
Host species	Rabbit
Tested applications	Suitable for: ChIC/CUT&RUN-seq, ChIP, IHC-P, WB, IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HepG2 and SW480 whole cell lysates; Human fetal liver, colon and fetal kidney lysates; mouse and rat liver lysates. IHC-P: Human liver, Human colon, mouse liver and rat colon tissues. IP: HepG2 whole cell extract. ChIP: HepG2 whole cell extract. ChIC/CUT&RUN-Seq: HepG2 cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 0.05% BSA, 40% Glycerol
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR16885

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab181604 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
ChIC/CUT&RUN-seq		Use at an assay dependent concentration. 5 µg
ChIP	★★★★☆ (1)	Use 2 µg for 25 µg of chromatin.
IHC-P	★★★★★ (1)	1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/1000. Detects a band of approximately 53 kDa (predicted molecular weight: 53 kDa).
IP		1/70.

Target

Function

Transcriptionally controlled transcription factor. Binds to DNA sites required for the transcription of alpha 1-antitrypsin, apolipoprotein CIII, transthyretin genes and HNF1-alpha. May be essential for development of the liver, kidney and intestine.

Involvement in disease

Defects in HNF4A are the cause of maturity-onset diabetes of the young type 1 (MODY1) [MIM:125850]; also symbolized MODY-1. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease.

Sequence similarities

Belongs to the nuclear hormone receptor family. NR2 subfamily.
Contains 1 nuclear receptor DNA-binding domain.

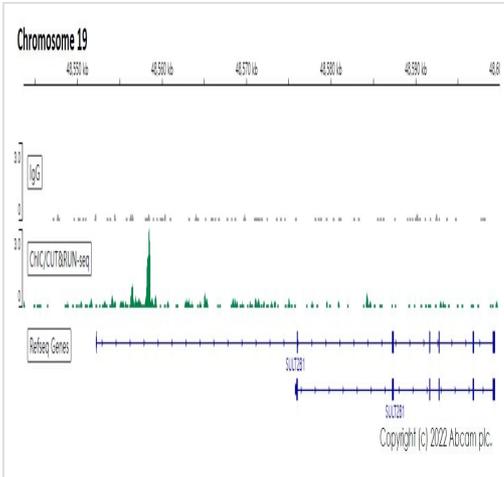
Post-translational modifications

Phosphorylated on tyrosine residue(s); phosphorylation is important for its DNA-binding activity. Phosphorylation may directly or indirectly play a regulatory role in the subnuclear distribution.

Cellular localization

Nucleus.

Images



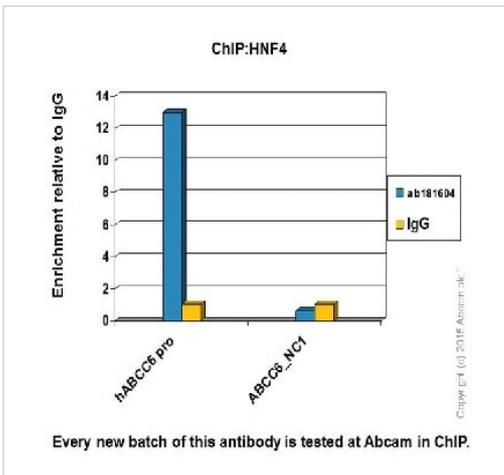
ChIP/CUT&RUN sequencing - Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)

ChIP/CUT&RUN sequencing – Recombinant Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)

ChIP/CUT&RUN was performed using a pAG-MNase at a final concentration of 700 ng/mL, 2.5×10^5 HepG2 (Human liver hepatocellular carcinoma cell line) cells and 5 μ g of ab181604 [EPR16885]. 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.

Additional screenshots of mapped reads can be downloaded [here](#).

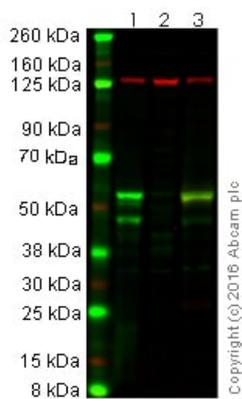
The University of Geneva owns patents relevant to ChIP (Chromatin Immuno-Cleavage) methods.



ChIP - Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)

Chromatin was prepared from HepG2 (Human liver hepatocellular carcinoma) cells according to the Abcam X-ChIP protocol. Cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 25 μ g of chromatin, 2 μ g of ab181604 (blue), and 20 μ l of Anti rabbit IgG sepharose beads. 2 μ g of rabbit normal IgG was added to the beads control (yellow). The immunoprecipitated DNA was quantified by real time PCR (Sybr green approach).

ABCC6_NC1 is negative control



Western blot - Anti-HNF-4-alpha antibody
[EPR16885] - ChIP Grade (ab181604)

All lanes : Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604) at 1/10000 dilution

Lane 1 : HepG2 whole cell lysate

Lane 2 : HEK293 whole cell lysate

Lane 3 : Mouse liver lysate

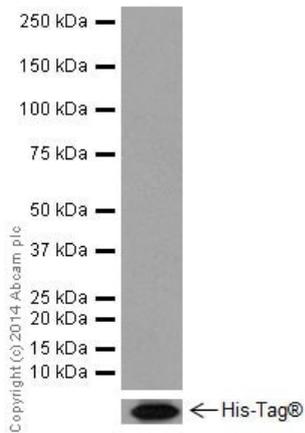
Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/20000 dilution

Predicted band size: 53 kDa

This blot was produced using a 4-12% Bis-Tris gel under the MOPS buffer system. The gel was run at 200V for 60 minutes before being transferred onto a nitrocellulose membrane at 30V for 70 minutes. The membrane was blocked for an hour before being incubated with ab181604 (rabbit monoclonal [EPR16885] to HNF-4-alpha; dilution 1:10000) and loading control **ab18058** (mouse monoclonal [SPM227] to Vinculin; dilution 1:10000) at 4°C overnight. Antibody binding was detected with **ab216773** (Goat anti-Rabbit IgG H&L (IRDye® 800CW); green; dilution 1:20000) and **ab216776** (Goat anti-Mouse IgG H&L (IRDye® 680RD), red; dilution 1:20000) for 1 hour at room temperature before imaging.



Western blot - Anti-HNF-4-alpha antibody
[EPR16885] - ChIP Grade (ab181604)

Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)
at 1/1000 dilution + Full length mouse HNF-4-gamma recombinant
protein at 10 µg

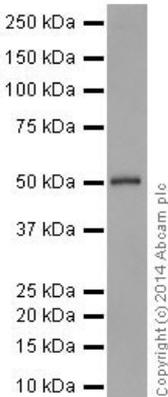
Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000
dilution

Predicted band size: 53 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDm/TBST.



Western blot - Anti-HNF-4-alpha antibody
[EPR16885] - ChIP Grade (ab181604)

Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)
at 1/10000 dilution + HepG2 (Human liver hepatocellular
carcinoma) whole cell lysate at 10 µg

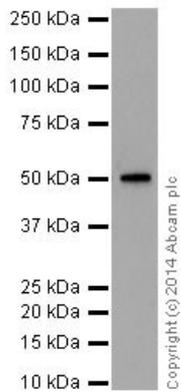
Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000
dilution

Predicted band size: 53 kDa

Observed band size: 53 kDa

Blocking/Dilution buffer: 5% NFDm/TBST.



Western blot - Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)

Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604) at 1/1000 dilution + SW480 (Human colon adenocarcinoma cell line) whole cell lysate at 10 µg

Secondary

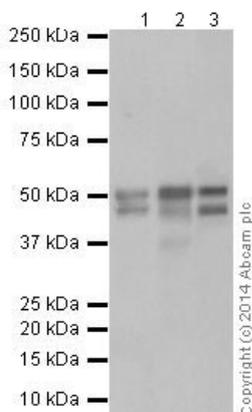
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 53 kDa

Observed band size: 53 kDa

Exposure time: 5 seconds

Blocking/Dilution buffer: 5% NFDm/TBST.



Western blot - Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)

All lanes : Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604) at 1/1000 dilution

Lane 1 : Human fetal liver lysate

Lane 2 : Human colon lysate

Lane 3 : Human fetal kidney lysate

Lysates/proteins at 10 µg per lane.

Secondary

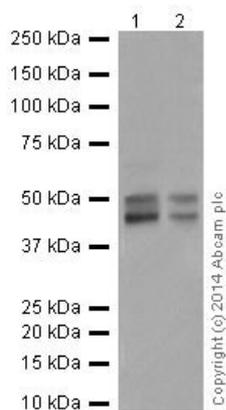
All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 53 kDa

Observed band size: 53 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFDm/TBST.



Western blot - Anti-HNF-4-alpha antibody
[EPR16885] - ChIP Grade (ab181604)

All lanes : Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604) at 1/1000 dilution

Lane 1 : Mouse liver lysate

Lane 2 : Rat liver lysate

Lysates/proteins at 10 µg per lane.

Secondary

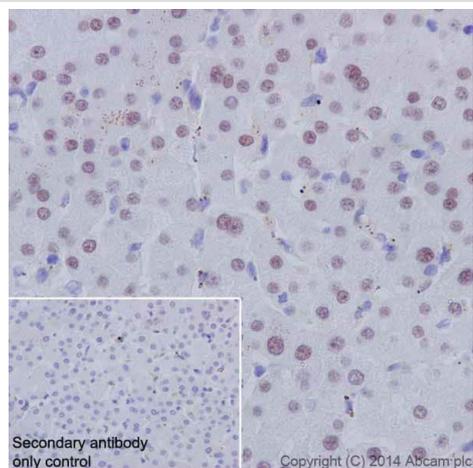
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 53 kDa

Exposure time: 15 seconds

This antibody can recognize 2 isoforms in mouse and rat. The predicted MW are 53KDa and 52 KDa.

Blocking/Dilution buffer: 5% NFDm/TBST.

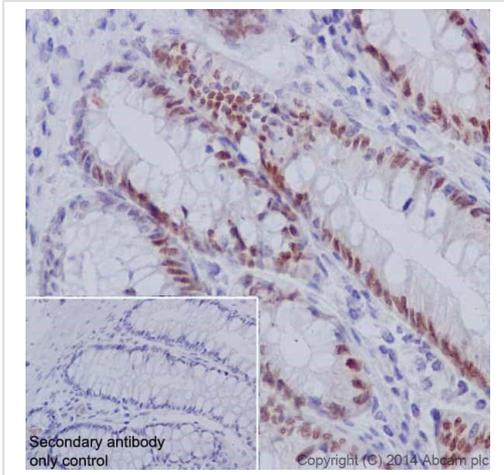


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HNF-4-alpha antibody
[EPR16885] - ChIP Grade (ab181604)

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling HNF-4-alpha with ab181604 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) secondary antibody at 1/500 dilution. Nucleus staining on Human liver is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

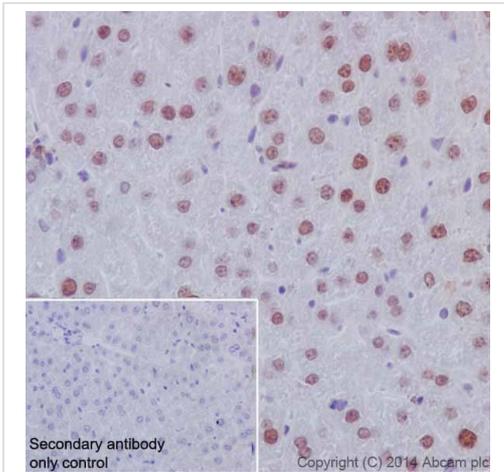


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling HNF-4-alpha with ab181604 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) secondary antibody at 1/500 dilution. Nuclear staining on epithelial cells of Human colon is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

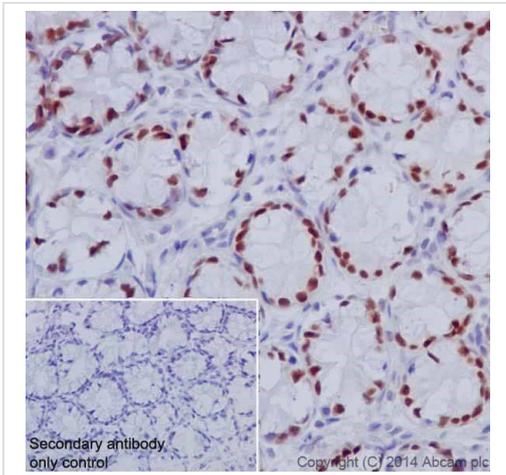


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling HNF-4-alpha with ab181604 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) secondary antibody at 1/500 dilution. Nuclear staining on mouse liver is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

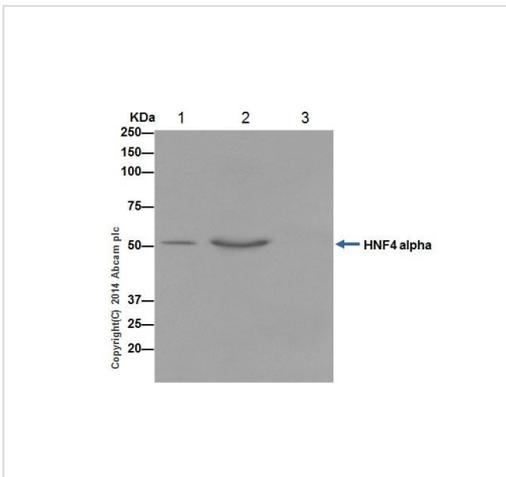


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)

Immunohistochemical analysis of paraffin-embedded Rat colon tissue labeling HNF-4-alpha with ab181604 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) secondary antibody at 1/500 dilution. Nuclear staining on epithelial cells of rat colon is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-HNF-4-alpha antibody [EPR16885] - ChIP Grade (ab181604)

HNF-4 alpha was immunoprecipitated from 1mg of HepG2 (Human liver hepatocellular carcinoma) whole cell extract with ab181604 at 1/70 dilution. Western blot was performed from the immunoprecipitate using ab181604 at 1/5000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution.

Lane 1: HepG2 whole cell extract 10 µg (Input).

Lane 2: ab181604 IP in HepG2 whole cell extract.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab181604 in HepG2 whole cell extract.

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

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-HNF-4-alpha antibody [EPR16885] - ChIP
Grade (ab181604)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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