abcam

ab289975

Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18]

Recombinant | RabMAb | 20ul selling size

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	EPR25290-18
Purification technique	Affinity purification Protein A
Concentration	0.57 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Human
Dilution info	1/500

Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/5000
Notes	-

Species	Rat
Dilution info	1/5000
Notes	-

Species	Human
Dilution info	1/5000
Notes	-

Target data

See full target information HCFC1

Function

Transcriptional coregulator (By similarity). Serves as a scaffold protein, bridging interactions between transcription factors, including THAP11 and ZNF143, and transcriptional coregulators (PubMed:26416877). Involved in control of the cell cycle (PubMed:10629049, PubMed:10779346, PubMed:15190068, PubMed:16624878, PubMed:23629655). Also antagonizes transactivation by ZBTB17 and GABP2; represses ZBTB17 activation of the p15(INK4b) promoter and inhibits its ability to recruit p300 (PubMed:10675337, PubMed:12244100). Coactivator for EGR2 and GABP2 (PubMed:12244100, PubMed:14532282). Tethers the chromatin modifying Set1/Ash2 histone H3 'Lys-4' methyltransferase (H3K4me) and Sin3 histone deacetylase (HDAC) complexes (involved in the activation and repression of transcription, respectively) together (PubMed:12670868). Component of a THAP1/THAP3-HCFC1-OGT complex that is required for the regulation of the transcriptional activity of RRM1 (PubMed:20200153). As part of the NSL complex it

may be involved in acetylation of nucleosomal histone H4 on several lysine residues (PubMed:20018852). Recruits KMT2E/MLL5 to E2F1 responsive promoters promoting transcriptional activation and thereby facilitates G1 to S phase transition (PubMed:23629655). Modulates expression of homeobox protein PDX1, perhaps acting in concert with transcription factor E2F1, thereby regulating pancreatic beta-cell growth and glucose-stimulated insulin secretion (By similarity). May negatively modulate transcriptional activity of FOXO3 (By similarity). (Microbial infection) In case of human herpes simplex virus (HSV) infection, HCFC1 forms a multiprotein-DNA complex with the viral transactivator protein VP16 and POU2F1 thereby enabling the transcription of the viral immediate early genes.

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

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	The Host Cell Factor C1 commonly known as HCF-1 is a large protein with a mass of approximately 203 kDa. It is widely expressed in many tissues and it plays a significant role in cellular processes such as transcription regulation. HCF-1 can be commonly found in the nucleus and cytoplasm and through various alternative names it is sometimes referred to as HCF-1 HCF-1 stores or HCP48BCF. Its mechanical action involves the regulation of transcription through interactions with other transcription factors and cofactors.
Biological function summary	In multiple cellular frameworks HCF-1 operates as a part of the Set1/COMPASS complex which is pivotal for transcriptional coactivation. It engages in the regulation of cell cycle progression acting as a co-regulator with transcription factors associated with cell proliferation. HCF-1 influences chromatin structure permitting changes in gene expression. This dynamic regulation facilitates processes like DNA replication and repair emphasizing its role in maintaining genomic stability.
Pathways	Several cellular pathways involve HCF-1 including the herpes simplex virus (HSV) replication pathway and the E2F transcriptional pathway. In the HSV pathway HCF-1 interacts with viral components to regulate gene expression. In the context of E2F pathways HCF-1 links with E2F transcription factors to control cell cycle entry and progression. Such interactions highlight its central role in coordinating cellular responses to both internal and external stimuli.
Associated diseases and disorders	HCF-1 connections arise prominently in cancer and neurodevelopmental disorders. Its deregulation is often seen in cancer where it can interact with oncoproteins such as c-Myc modulating oncogenic transcription. HCF-1's role in transcriptional regulation and chromatin remodeling ties it to neurodevelopmental disorders where associated proteins like SETD1A are critical. Understanding these connections highlights the therapeutic potential of targeting HCF-1 in disease contexts.

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

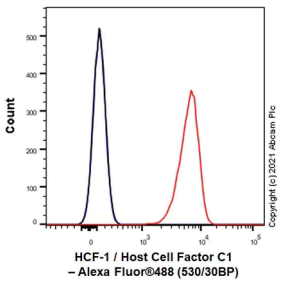
We do not recommend this combination. It is not covered by our product promise.

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.

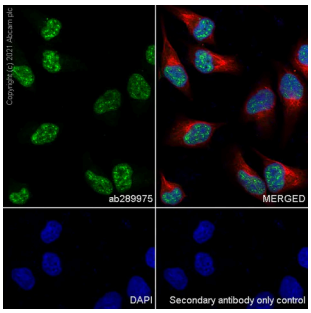
9 product images



Flow Cytometry (Intracellular) - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975)

HCF-1 / Host Cell Factor C1 Flow Cytometry (Intracellular) staining using rabbit Anti-HCF-1 / Host Cell Factor C1 antibody

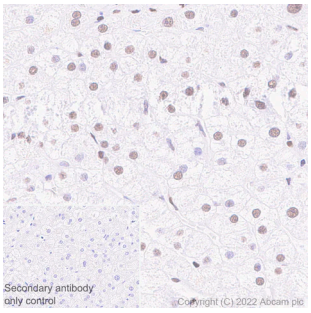
Flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling HCF-1 / Host Cell Factor C1 with ab289975 at 1/500 dilution (0.1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975)

HCF-1 / Host Cell Factor C1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-HCF-1 / Host Cell Factor C1 antibody

Immunofluorescent analysis of 100% methanol-fixed, 0.1% Triton X-100 permeabilized HeLa cells labeling HCF-1 / Host Cell Factor C1 with ab289975 at 1/2000 dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in HeLa cell line is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.

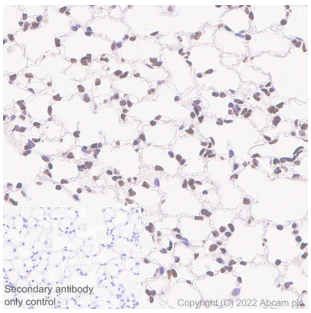


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975)

HCF-1 / Host Cell Factor C1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-HCF-1 / Host Cell Factor C1 antibody

Immunohistochemical analysis of paraffin-embedded Human liver tissue labelling HCF-1 / Host Cell Factor C1 with ab289975 at 1/5000 followed by Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on human liver. The section was incubated with ab289975 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

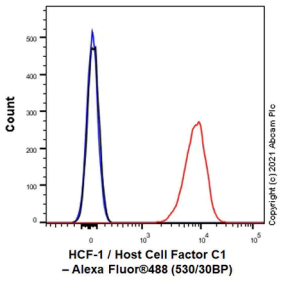


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975)

HCF-1 / Host Cell Factor C1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-HCF-1 / Host Cell Factor C1 antibody

Immunohistochemical analysis of paraffin-embedded Mouse lung tissue labelling HCF-1 / Host Cell Factor C1 with ab289975 at 1/10000 followed by Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on mouse lung. The section was incubated with ab289975 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

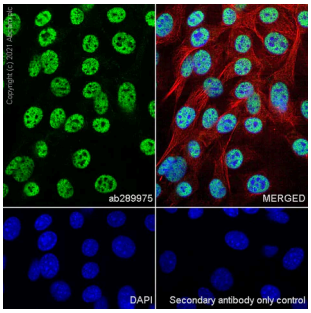
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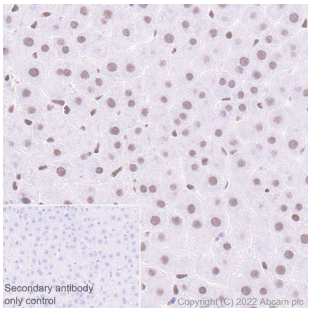
Flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized NIH/3T3 (Mouse embryonic fibroblast) cells labelling HCF-1 / Host Cell Factor C1 with ab289975 at 1/500 dilution (0.1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975)

HCF-1 / Host Cell Factor C1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-HCF-1 / Host Cell Factor C1 antibody

Immunofluorescent analysis of 100% methanol-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 cells labeling HCF-1 / Host Cell Factor C1 with ab289975 at 1/2000 dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in NIH/3T3 cell line. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution(Red). The Nuclear counterstain was DAPI (Blue).
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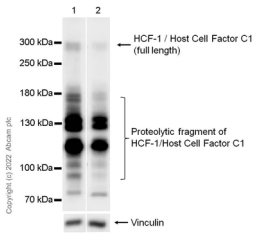


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975)

HCF-1 / Host Cell Factor C1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-HCF-1 / Host Cell Factor C1 antibody

Immunohistochemical analysis of paraffin-embedded Rat liver tissue labelling HCF-1 / Host Cell Factor C1 with ab289975 at 1/10000 dilution followed by Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on rat liver. The section was incubated with ab289975 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Western blot - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975)

HCF-1 / Host Cell Factor C1 Western blot staining using rabbit Anti-HCF-1 / Host Cell Factor C1 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID:Â 31693902).

Exposure time: 26 seconds.

All lanes:
Western blot - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975) at 1/5000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell) transfected with scrambled siRNA control, whole cell lysate at 10 µg

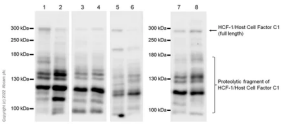
Lane 2:
HeLa transfected with HCF-1/Host Cell Factor C1 siRNA, whole cell lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution

Predicted band size: 208 kDa

Observed band size: 100-150 kDa, 300 kDa



Western blot - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975)

HCF-1 / Host Cell Factor C1 Western blot staining using rabbit Anti-HCF-1 / Host Cell Factor C1 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 31693902)

Exposure times: Lanes 1-4: 6 seconds Lanes 5-6: 26 seconds Lanes 7-8: 8 seconds

All lanes:
Western blot - Anti-HCF-1 / Host Cell Factor C1 antibody [EPR25290-18] (ab289975) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 2:
K562 (human chronic myelogenous leukemia lymphoblast), whole cell lysate at 20 µg

Lane 3:
NIH/3T3 (mouse embryonic fibroblast), whole cell lysate at 20 µg

Lane 4:
C2C12 (mouse myoblasts), whole cell lysate at 20 µg

Lane 5:
C6 (rat glial tumor glial cell), whole cell lysate at 20 µg

Lane 6:
PC-12 (rat adrenal gland pheochromocytoma), whole cell lysate at 20 µg

Lane 7:
Mouse lung tissue lysate at 20 µg

Lane 8:
Mouse testis tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution

Predicted band size: 208 kDa

Observed band size: 100-150 kDa, 300 kDa

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