abcam

ab314109

Anti-KLF5 antibody [BLR243L] - BSA free

Recombinant | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.8 - 8.6 Preservative: 0.09% Sodium azide Constituents: 98% Borate buffered saline
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human KLF5 aa 300-350. The exact immunogen used to generate this antibody is proprietary information. Database link Q13887
Clone number	BLR243L

Reactivity data

Flow Cyt

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

ICC

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Target data

See full target information KLF5

Function	Transcription factor that binds to GC box promoter elements. Activates the transcription of these genes.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	Up to 12 months
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

REACH authorisation
Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	KLF5 (Kruppel-like factor 5) also referred to as BTEB2 is a transcription factor with a molecular mass of approximately 54 kDa. It belongs to the KLF family characterized by its three C2H2-type zinc finger domains which bind to specific DNA sequences regulating gene expression. KLF5 displays ubiquitous expression but is highly concentrated in epithelial tissues specifically in the gastrointestinal tract and skin. This factor plays an essential role in the regulation of cell proliferation and differentiation.
Biological function summary	Kruppel-like factor 5 modulates gene transcription by binding to GC-rich elements in promoter regions influencing various cellular processes. KLF5 can interact with other transcription factors and co-regulators forming complexes important for its function. It significantly impacts epithelial cell dynamics affecting cell transformation differentiation and migration. In particular it plays a pivotal role in maintaining the proliferative capacity of epithelial cells and supporting wound healing processes.

Pathways	Kruppel-like factor 5 holds a notable position in the TGF-beta and Wnt signaling pathways which govern cellular growth control and development. In the TGF-beta pathway KLF5 can antagonize SMAD-mediated transcription suppression promoting cell proliferation particularly in epithelial stem cells. In the Wnt pathway it influences beta-catenin activity essential for epithelial cell renewal and maintenance. Through these pathways KLF5 interacts with proteins such as SMAD3 and beta-catenin coordinating cell turnover and tissue homeostasis.
Associated diseases and disorders	KLF5 impacts cancer and cardiovascular diseases. It plays a complex role in oncogenesis where its overexpression is associated with colorectal breast and prostate cancers due to its ability to enhance proliferation. KLF5's interaction with proteins like p53 influences tumorigenic potentials. In cardiovascular disorders KLF5 contributes to vascular pathology affecting smooth muscle cell proliferation and atherosclerosis. Through its regulation of cyclin D1 it integrates into pathways leading to abnormal vascular smooth muscle growth linking it further to cardiovascular complications.

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

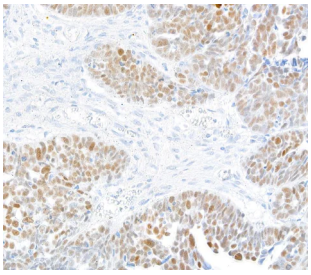
We do not recommend this combination. It is not covered by our product promise.

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.

11 product images



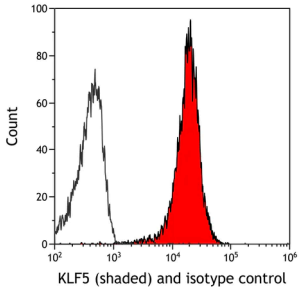
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

Detection of human KLF5 by immunohistochemistry. Sample: FFPE section of human ovarian carcinoma. Antibody: Rabbit anti-KLF5 recombinant monoclonal antibody [BLR243L) (A700-243). Secondary: HRP-conjugated goat anti-rabbit IgG.



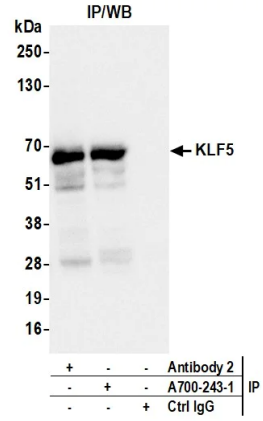
Immunocytochemistry - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

Detection of human KLF5 by immunocytochemistry. Sample: FFPE section of HT-29 cells. Antibody: Rabbit anti-KLF5 recombinant monoclonal antibody [BLR243L) (A700-243). Secondary: HRP-conjugated goat anti-rabbit IgG.



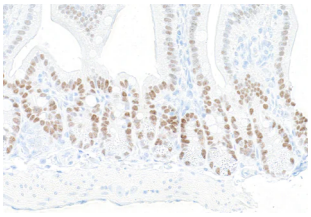
Flow Cytometry - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

Detection of human KLF5 (shaded) in HT-29 cells by flow cytometry. Antibody: Rabbit anti-KLF5 recombinant monoclonal antibody [BLR243K] (A700-243) or isotype control (unshaded). Secondary: DyLight® 650-conjugated goat anti-rabbit IgG.



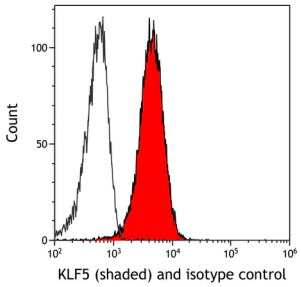
Immunoprecipitation - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

Samples: Whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from KM12 cells prepared using NETN lysis buffer. Antibodies: Rabbit anti-KLF5 recombinant monoclonal antibody [BLR243L] (A700-243) used for IP at 6 µl/mg lysate. KLF5 was also immunoprecipitated by a second antibody against a different epitope of KLF5 (Antibody 2). For blotting immunoprecipitated KLF5, A700-243 was used at 1:1000. Chemiluminescence with an exposure time of 3 seconds.



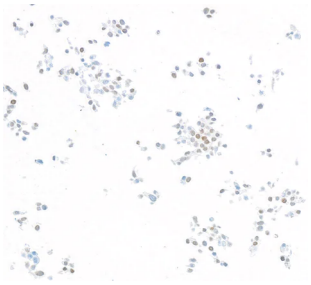
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

Detection of mouse KLF5 by immunohistochemistry. Sample: FFPE section of mouse gut. Antibody: Rabbit antiKLF5 recombinant monoclonal antibody [BLR243L) (A700-243). Secondary: HRP-conjugated goat anti-rabbit IgG.



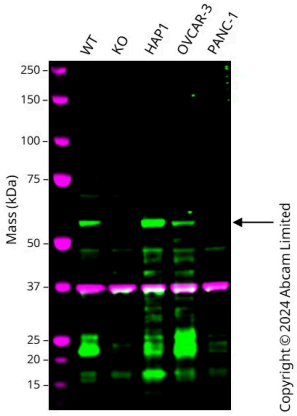
Flow Cytometry - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

Detection of mouse KLF5 (shaded) in NIH3T3 cells by flow cytometry. Antibody: Rabbit anti-KLF5 recombinant monoclonal antibody [BLR243K] (A700-243) or isotype control (unshaded). Secondary: DyLight® 650-conjugated goat anti-rabbit IgG.



Immunocytochemistry - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

Detection of mouse KLF5 by immunocytochemistry. Sample: FFPE section of CT26 cells. Antibody: Rabbit antiKLF5 recombinant monoclonal antibody [BLR243L) (A700-243). Secondary: HRP-conjugated goat anti-rabbit IgG.



Western blot - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

KLF5 Western blot staining using rabbit Anti-KLF5 antibody

Western blot: Anti-KLF5 antibody [BLR243L] (ab314109) staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (ab8245) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab314109 was shown to bind specifically to KLF5. A band was observed at 55 kDa in wild-type A549 cell lysates with no signal observed at this size in KLF5 knockout cell line. To generate this image, wild-type and KLF5 knockout A549 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.
All lanes:
Western blot - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109) at 1/1000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
KLF5 knockout A549 cell lysate at 20 µg

Lane 3:
HAP1 cell lysate at 20 µg

Lane 4:
OVCAR-3 cell lysate at 20 µg

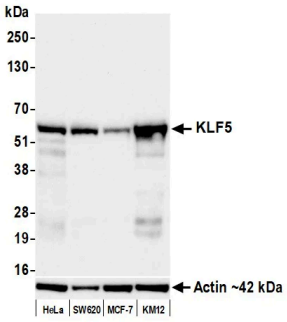
Lane 5:
PANC-1 cell lysate at 20 µg

Secondary

All lanes:
Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution

Performed under reducing conditions.

Observed band size: 55 kDa



Western blot - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

Samples: Whole cell lysate (25 µg) from HeLa, SW620, MCF-7, and KM12 cells prepared using NETN lysis buffer. Antibody: Rabbit anti-KLF5 recombinant monoclonal antibody [BLR243L] (A700-243) used at 1:1000. Secondary: HRP-conjugated goat anti-rabbit IgG. Chemiluminescence with an exposure time of 10 seconds. Lower Panel: Rabbit anti-Actin recombinant monoclonal antibody [BLR057F].
All lanes:
Western blot - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109) at 1/1000 dilution

Lane 1:
HeLa Whole cell lysate at 25 µg

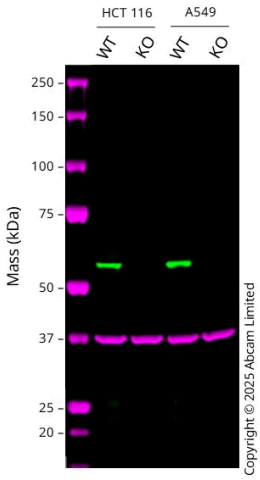
Lane 2:
SW620 Whole cell lysate at 25 µg

Lane 3:
MCF-7 Whole cell lysate at 25 µg

Lane 4:
KM12 Whole cell lysate at 25 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG



Western blot - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

KLF5 Western blot staining using rabbit Anti-KLF5 antibody

Western blot: Anti-KLF5 antibody [BLR243L] - BSA free ab314109 staining at 1/1000 dilution, shown in green; Mouse anti GAPDH (ab8245) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 55 kDa in Wild-type HCT 116 cell lysates with no signal observed at this size in KLF5 knockout HCT 116 cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109) at 1/1000 dilution

Lane 1:
Wild-type HCT 116 at 20 µg

Lane 2:
Western blot - Human KLF5 knockout HCT116 cell line (ab301030) at 20 µg

Lane 3:
Western blot - Human wild-type A549 cell line (ab288558) at 20 µg

Lane 4:
Western blot - Human KLF5 knockout A549 cell line (ab301031) at 20 µg

Secondary

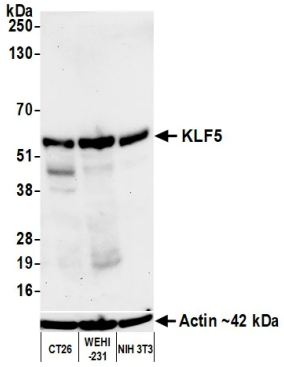
Lanes 1 - 4:
Goat anti-Rabbit 800CW at 1/20000 dilution

Lanes 1 - 4:
Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 51 kDa, 55 kDa

Observed band size: 55 kDa, 37 kDa



Western blot - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109)

Samples: Whole cell lysate (25 µg) from CT26, WEHI-231, and NIH 3T3 cells prepared using NETN lysis buffer. Antibody: Rabbit antiKLF5 recombinant monoclonal antibody [BLR243L] (A700-243) used at 1:1000. Secondary :HRP-conjugated goat anti-rabbit IgG. Chemiluminescence with an exposure time of 75 seconds. Lower Panel: Rabbit anti-Actin recombinant monoclonal antibody [BLR057F].
All lanes:
Western blot - Anti-KLF5 antibody [BLR243L] - BSA free (ab314109) at 1/1000 dilution

Lane 1:
CT26 Whole cell lysate at 25 µg

Lane 2:
WEHI-231 Whole cell lysate at 25 µg

Lane 3:
NIH 3T3 Whole cell lysate at 25 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG

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