abcam

ab243882

Anti-B7-H3/CD276 antibody [BLR025F] - BSA free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.8 - 8.6 Preservative: 0.09% Sodium azide Constituents: 99% Borate buffered saline
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human CD276 aa 500-550. The exact immunogen used to generate this antibody is proprietary information. Database link Q5ZPR3
Clone number	BLR025F
Purification notes	Recombinant antibody was purified from cell culture supernatant.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

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

ICC

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Expected

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

IP

Tested

Species	Human
Dilution info	-
Notes	Use 3µl/mg lysate.

Expected

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

Flow Cyt

Tested

Species	Human

Dilution info	1 µL for 10^6 Cells
Notes	-

Species	Mouse
Dilution info	1 µL for 10^6 Cells
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Target data

See full target information B7-H3/CD276

Function	May participate in the regulation of T-cell-mediated immune response. May play a protective role in tumor cells by inhibiting natural-killer mediated cell lysis as well as a role of marker for detection of neuroblastoma cells. May be involved in the development of acute and chronic transplant rejection and in the regulation of lymphocytic activity at mucosal surfaces. Could also play a key role in providing the placenta and fetus with a suitable immunological environment throughout pregnancy. Both isoform 1 and isoform 2 appear to be redundant in their ability to modulate CD4 T-cell responses. Isoform 2 is shown to enhance the induction of cytotoxic T-cells and selectively stimulates interferon gamma production in the presence of T-cell receptor signaling.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

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.

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Supplementary info

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

Activity summary	CD276 also known as B7-H3 is an immunoregulatory protein with a mass of approximately 57 kDa although post-translational modifications can increase its observed size. It is a member of the B7 family which is part of the immunoglobulin superfamily. CD276 is widely expressed in various tissues including placenta liver heart and also in many tumor cells. It is observed in lesser amounts in normal tissues making it an interesting target for cancer research. Various assays like HEK293 and HEK293T cell confluency studies often use CD276 to explore its expression under different conditions and seeding densities which are represented in confluency charts.
Biological function summary	CD276 modulates immune responses by acting as a co-inhibitory ligand impacting T-cell proliferation and cytokine synthesis. Not part of a known complex it plays a role in the adaptive immune system by providing negative feedback regulation that can inhibit the immune response. This capability has implications in preventing autoimmunity but may also contribute to tumor immune evasion by reducing effective anti-tumor responses. The B7-H3/CD276 interaction with receptors such as IL receptor family members suggests its diverse immunomodulatory functions.
Pathways	CD276 participates in the T-cell receptor (TCR) signaling pathways influencing immune checkpoint pathways. It interacts with other immune checkpoint proteins like PD-L1 and CTLA-4 but its exact receptor partner remains unidentified. The presence of CD276 in these pathways highlights its role in controlling T-cell activation and tolerance. By modulating TCR signals and impacting downstream effects CD276 serves as a regulatory point that can balance immune activation and inhibition critical in immune-mediated conditions.
Associated diseases and disorders	CD276 has strong associations with cancer particularly in solid tumors such as prostate and breast cancer. It is often overexpressed in malignant tissues

contributing to immune evasion by tumors. Researchers propose it as a potential target for cancer immunotherapy due to this attribute. CD276's link to disorders like asthma has also been suggested where its interaction with proteins involved in inflammatory pathways such as IL response elements can exacerbate the condition. This implicates it as a dual-role protein in both disease progression and potential therapeutic targeting.

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

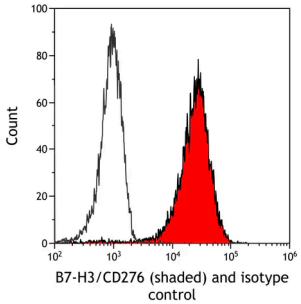
We do not recommend this combination. It is not covered by our product promise.

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.

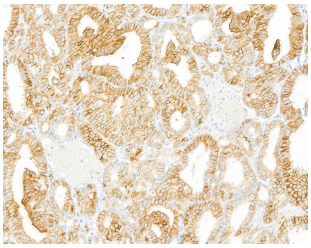
11 product images



Flow Cytometry - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Flow Cytometry staining of HEK293T cells using rabbit Anti-B7-H3/CD276 antibody

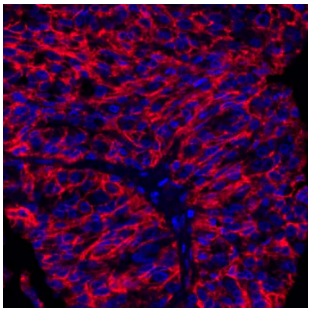
Flow cytometry overlay histogram of 4% formaldehyde fixed HEK293T cells permeabilized with 90% methanol labeling mouse B7-H3/CD276 with ab243882 at 1 µl per 1 x 10^6 cells etoposide treated (shaded) compared with a Isotype control (unshaded). Secondary antibody details: Goat Anti-Rabbit IgG H&L (DyLight® 650) (ab96886).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human prostate carcinoma tissue using rabbit Anti-B7-H3/CD276 antibody

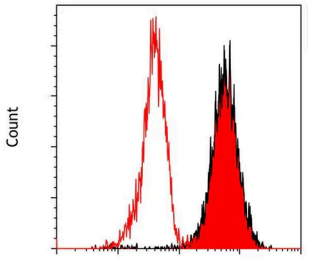
Immunohistochemical analysis of Formalin-Fixed Paraffin-Embedded prostate carcinoma labeling human B7-H3 with ab243882, followed by a HRP-conjugated goat anti-rabbit IgG as secondary. Substrate: DAB. Membrane staining on prostate carcinoma is observed. Counter stained with hematoxylin. Epitope retrieval with citrate buffer pH 6.0 for 20 minutes is recommended.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-B7-H3/CD276 antibody

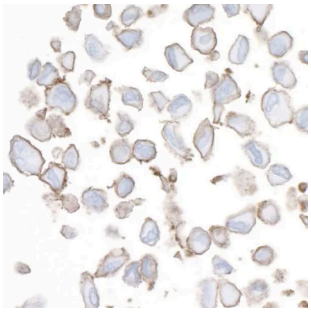
Immunohistochemical analysis of formalin-fixed, paraffin-embedded human lung carcinoma labeling CD276 with ab243882 at 1/250 dilution, followed by secondary antibody HRP-conjugated Goat Anti-Rabbit IgG. Counterstained with DAPI (blue). Opal staining.



Flow Cytometry - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Flow Cytometry staining using rabbit Anti-B7-H3/CD276 antibody

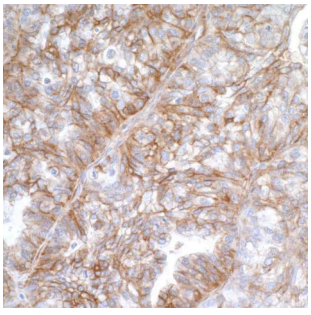
Flow cytometric analysis of HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate labeling CD276 with ab243882 (shaded) compared with a isotype control (unshaded). Secondary: DyLight® 650-conjugated goat anti-rabbit IgG.



Immunocytochemistry - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Immunocytochemistry staining using rabbit Anti-B7-H3/CD276 antibody

Formalin-fixed, paraffin-embedded A172 cells labeling CD276 using ab243882 at 1/200 dilution in ICC analysis. A HRP-conjugated goat-anti rabbit IgG was used as the secondary. DAB staining.

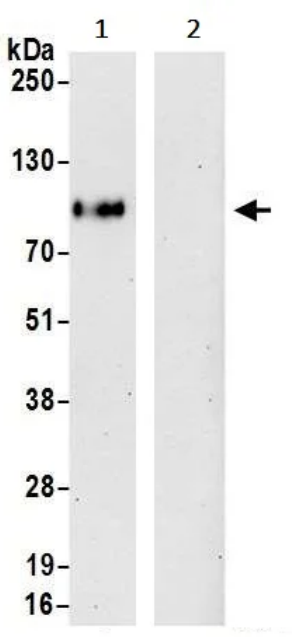


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-B7-H3/CD276 antibody

Formalin-fixed, paraffin-embedded human ovarian tissue stained for CD276 using ab243882 at 1/200 dilution in immunohistochemical analysis. A HRP-conjugated goat anti-rabbit antibody was

used as the secondary. DAB staining.



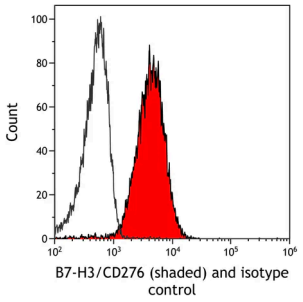
Immunoprecipitation - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

CD276 was immunoprecipitated from 1.0 mg HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab243882 at 3 µl per reaction. Western blot was performed on the immunoprecipitate using ab243882 at 1/1000 dilution. Lane 1: ab243882 IP in HeLa whole cell lysate.
Lane 2: Control IgG IP in HeLa whole cell lysate.

Detection: Chemiluminescence with an exposure time of 30 seconds.

All lanes:
Immunoprecipitation - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

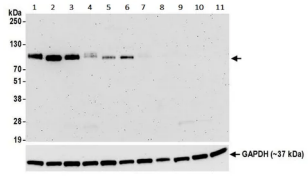
Predicted band size: 57 kDa



Flow Cytometry - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Flow Cytometry staining of NIH3T3 cells using rabbit Anti-B7-H3/CD276 antibody

Flow cytometry overlay histogram of 4% formaldehyde fixed NIH3T3 cells permeabilized with 90% methanol labeling mouse B7-H3/CD276 with ab243882 at 1 µl per 1 x 10^6 cells. (shaded) compared with a Isotype control (unshaded). Secondary antibody details: Goat Anti-Rabbit IgG H&L (DyLight® 650) (ab96886).



Western blot - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Western blot staining using rabbit Anti-B7-H3/CD276 antibody

Western blot analysis using ab243882 at 1/1000 dilution.
Lane 1: MCF7 whole cell lysate (15 µg).

Lane 2: A172 whole cell lysate (15 µg).

Lane 3: U-251 MG whole cell lysate (15 µg).

Lane 4: OVCAR-3 whole cell lysate (15 µg).

Lane 5: HeLa whole cell lysate (15 µg).

Lane 6: HEK-293T whole cell lysate (15 µg).

Lane 7: HCT 116 whole cell lysate (15µg).

Lane 8: RPMI 8226 whole cell lysate (15 µg).

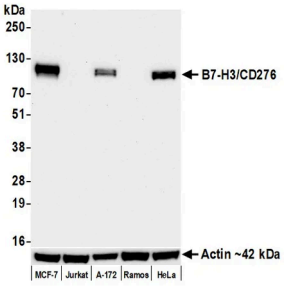
Lane 9: MJ whole cell lysate (15 µg).

Lane 10: Ramos whole cell lysate (15 µg).

Lane 11: Jurkat whole cell lysate (15 µg).

A HRP-conjugated goat anti-rabbit IgG antibody was used as the secondary. Detection: chemiluminescence with an exposure time of 3 minutes.
All lanes:
Western blot - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

Predicted band size: 57 kDa



Western blot - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Western blot staining using rabbit Anti-B7-H3/CD276 antibody

All lanes:
Western blot - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882) at 1/1000 dilution

Lane 1:
MCF-7 whole cell lysate at 25 µg

Lane 2:
Jurkat whole cell lysate at 25 µg

Lane 3:
A-172 whole cell lysate at 25 µg

Lane 4:
Ramos whole cell lysate at 25 µg

Lane 5:
HeLa whole cell lysate at 25 µg

Secondary

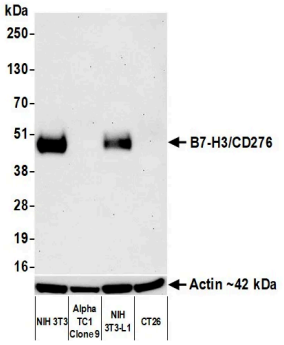
All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051)

Developed using the ECL technique.

Predicted band size: 57 kDa

Observed band size: 110 kDa

Exposure time: 30s



Western blot - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882)

B7-H3/CD276 Western blot staining using rabbit Anti-B7-H3/CD276 antibody

All lanes:
Western blot - Anti-B7-H3/CD276 antibody [BLR025F] - BSA free (ab243882) at 1/1000 dilution

Lane 1:
NIH 3T3 whole cell lysate at 50 µg

Lane 2:

AlphaTC1 Clone 9 whole cell lysate at 50 µg

Lane 3:
NIH 3T3-L1 whole cell lysate at 50 µg

Lane 4:
CT26 whole cell lysate at 50 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051)

Developed using the ECL technique.

Predicted band size: 34 kDa

Observed band size: 46 kDa

Exposure time: 3min

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