abcam

ab224676

Anti-CD272/BTLA antibody [EPR20539] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR20539
Purification technique	Affinity purification Protein A
Concentration	0.998 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	-

Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

WB

Expected

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

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information Btla

Function Inhibitory receptor on lymphocytes that negatively regulates antigen receptor signaling via PTPN6/SHP-1 and PTPN11/SHP-2 (PubMed:12796776, PubMed:14652006). May interact in cis (on the same cell) or in trans (on other cells) with TNFRSF14 (PubMed:19915044). In cis interactions, appears to play an immune regulatory role inhibiting in trans interactions in naive T cells to maintain a resting state. In trans interactions, can predominate during adaptive immune response to provide survival signals to effector T cells (PubMed:19915044).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab224676 is the carrier-free version of ab212089.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	CD272 also known as BTLA (B and T Lymphocyte Attenuator) is an immunoregulatory protein with a mass approximately 34 kDa. This target is part of the CD28 immunoglobulin superfamily and is expressed on the surfaces of various immune cells including T cells B cells and dendritic cells. BTLA/CD272 serves as a co-inhibitory molecule important in maintaining immune homeostasis. Its expression is influenced by factors present in the microenvironment of immune tissues.
Biological function summary	BTLA functions as a negative regulator of immune responses by delivering inhibitory signals to immune cells upon binding to its ligand HVEM (Herpesvirus entry mediator). It forms a part of an immunological checkpoint complex that modulates lymphocyte activity to prevent overactivation and autoimmunity. This mechanism helps maintain a balance between immune defense and tolerance contributing to self-tolerance.
Pathways	The BTLA/CD272 protein engages with pathways involved in immune checkpoints and T-cell receptor signaling. It interacts with proteins like HVEM and collaborates with receptors such as PD-1 and CTLA-4. These interactions play a role in the downregulation of T-cell responses which is essential in various immune processes. The signaling pathways influenced by BTLA/CD272 are integral in moderating immune responses cooperation and adaptation.
Associated diseases and disorders	BTLA is associated with autoimmune diseases and cancer. In autoimmune disorders an altered expression or function of BTLA can lead to dysregulated immune responses causing tissue damage. In cancer the protein may contribute to immune evasion by tumors aiding tumor growth and progression. The interplay of BTLA with proteins such as PD-1 makes it a potential target for immunotherapy strategies in oncology and autoimmunity treatments.

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

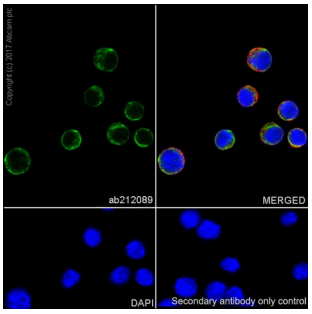
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images



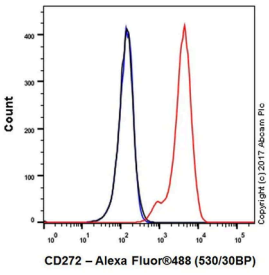
Immunocytochemistry/ Immunofluorescence - Anti-CD272/BTLA antibody [EPR20539] - BSA and Azide free (ab224676)

CD272/BTLA Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD272/BTLA antibody

Immunofluorescent analysis of 100% methanol fixed A20 (mouse reticulum sarcoma cell line) cells labeling CD272/BTLA with ab212089 at 1/100 dilution, followed by by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic and membranous staining on A20 cell line.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab212089).

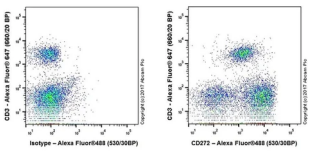


Flow Cytometry - Anti-CD272/BTLA antibody [EPR20539] - BSA and Azide free (ab224676)

CD272/BTLA Flow Cytometry staining using rabbit Anti-CD272/BTLA antibody

Flow cytometric analysis of A20 (mouse reticulum sarcoma cell line) cell line labeling CD272/BTLA with ab212089 at 1/500 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.
Total viable cells were gated for the FC image.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab212089).



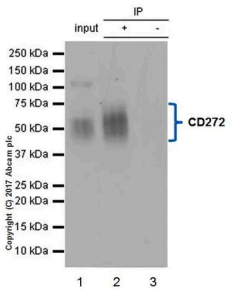
Flow Cytometry - Anti-CD272/BTLA antibody [EPR20539] - BSA and Azide free (ab224676)

CD272/BTLA Flow Cytometry staining using rabbit Anti-CD272/BTLA antibody

Flow cytometric analysis of mouse splenocytes labeling CD272/BTLA with ab212089 at 1/500 dilution (right) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (left). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.
Mouse splenocytes stained with CD3 and ab212089. Total viable cells were gated for the FC image. T cells (CD3+, upper population) show a moderate positive signal while B cells (lower right

population in right panel) show stronger positive signal. The expression pattern is also reported in literature (PMID: 19949073).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab212089).



Immunoprecipitation - Anti-CD272/BTLA antibody [EPR20539] - BSA and Azide free (ab224676)

CD272/BTLA was immunoprecipitated from 0.35 mg mouse spleen lysate with ab212089 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab212089 at 1/500 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1,000 dilution.
Lane 1: Mouse spleen lysate 10 µg (Input).

Lane 2: ab212089 IP in mouse spleen lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab212089 in mouse spleen lysate.

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

Exposure time: 1 second.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab212089).

All lanes:
Immunoprecipitation - Anti-CD272/BTLA antibody [EPR20539] (ab212089)

Predicted band size: 33 kDa

Exposure time: 1s

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