abcam

ab275021

Anti-CD83 antibody [EPR23809-19]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR23809-19
Purification technique	Affinity purification Protein A
Concentration	0.526 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat

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

Flow Cyt

Tested

Species	Human
Dilution info	1/2500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information CD83

Function

Transmembrane glycoprotein predominantly found on the surface of many immune cells including dendritic cells or lymphocytes that plays various roles in immune response regulation. Plays an essential role in CD4(+) T-selection, differentiation and stability by regulating the activity of the major E3 ubiquitin ligase responsible for controlling MHCII trafficking MARCHF8. Also inhibits MARCHF1 association with MHCII or CD86 to prevent their ubiquitination and subsequent degradation (PubMed:21220452). In addition, acts as an important modulator of protective responses against acute infections (By similarity).

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	CD83 also known as 3D11 in some contexts is a protein with important roles in the immune system. The CD83 protein is a glycoprotein with a molecular mass of approximately 45 kDa. It is expressed in various immune cells including dendritic cells B cells thymic epithelial cells and activated T cells. CD83 acts as a surface marker during the maturation and activation of these cells. This characteristic makes it a useful marker in immunological studies often referred to by scientists as the CD83 marker.
Biological function summary	The primary role of CD83 involves the regulation of immune responses. It functions by modulating the activity and communication of immune cells especially impacting the antigen-presenting capabilities of dendritic cells. CD83 also plays a role in promoting the maturation of these cells and influencing T-cell responses. Although CD83 is not generally recognized as a part of a complex its interactions with other cell surface molecules are significant for immune system function.
Pathways	CD83 has notable involvement in immune signaling pathways including the NF-kB and JAK/STAT pathways. These pathways are critical for transmitting signals that influence cell survival proliferation and activation. Through these pathways CD83 interacts with proteins such as cytokines and growth factors which further modulate their effects on immune cells and their responses.

Associated diseases and disorders	Understanding CD83's role provides insights into conditions like autoimmune diseases and immune deficiencies. In autoimmune diseases irregular expression or function of CD83 can disrupt normal immune response contributing to pathogenesis. Its relationship with other proteins such as CD28 in T-cell activation underlies its involvement in disorders characterized by immune dysregulation. Furthermore CD83 expression profiles may help decipher cancer immune evasion mechanisms providing possible therapeutic targets.

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

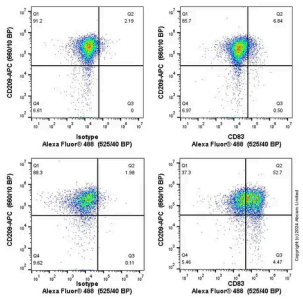
We do not recommend this combination. It is not covered by our product promise.

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.

5 product images



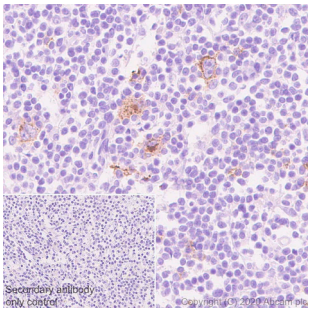
Flow Cytometry - Anti-CD83 antibody [EPR23809-19] (ab275021)

CD83 Flow Cytometry staining of Monocytes-derived-dendritic cells using rabbit Anti-CD83 antibody

Flow cytometry staining of human monocyte-derived dendritic cells (top) or human monocyte-derived dendritic cells treated with 100ng/mL LPS for 24 Hours (bottom), with ab275021 (right) or Rabbit IgG (monoclonal) Phycoerythrin (ab209478) (left). Cells were incubated for 30 min on ice in 1x PBS containing 10 µg/ml human IgG and 10 % normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab275021 or Rabbit IgG (monoclonal) Phycoerythrin (ab209478) (1x 10^6 in 100 µl at 0.2 µg/ml (1/2,500)) for 30min on ice. The cells were simultaneously stained with CD209.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min on ice

Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter. Events were gated on live cells.

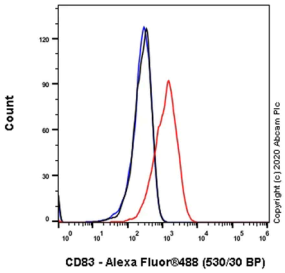


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD83 antibody [EPR23809-19] (ab275021)

CD83 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD83 antibody

Immunohistochemical analysis of paraffin-embedded human Hodgkin's lymphoma tissue labeling CD83 with ab275021 at 1/500 dilution followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on human Hodgkin's lymphoma (PMID: 24633193). The section was incubated with ab275021 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 ready to use 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.

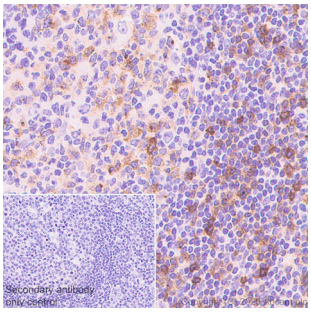


Flow Cytometry - Anti-CD83 antibody [EPR23809-19] (ab275021)

CD83 Flow Cytometry staining using rabbit Anti-CD83 antibody

Flow cytometric analysis of HDLM-2 (Human Hodgkin lymphoma) cells labelling CD83 with ab275021 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).
Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

Gated on viable cells.

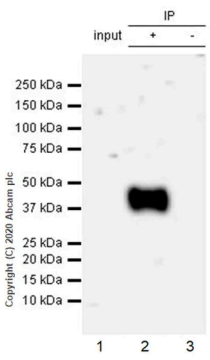


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD83 antibody [EPR23809-19] (ab275021)

CD83 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD83 antibody

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling CD83 with ab275021 at 1/500 dilution followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on human tonsil. The section was incubated with ab275021 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 ready to use 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.



Immunoprecipitation - Anti-CD83 antibody [EPR23809-19] (ab275021)

CD83 was immunoprecipitated from 0.35 mg HDLM-2 (human hodgkin lymphoma) whole cell lysate with ab275021 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab275021 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: HDLM-2 whole cell lysate 10 µg.

Lane 2: ab275021 IP in HDLM-2 whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab275021 in HDLM-2 whole cell lysate.

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

Exposure time: 145 seconds.

The expression profile observed is consistent with what has been described in the literature (PMID: 15320871).

All lanes:
Immunoprecipitation - Anti-CD83 antibody [EPR23809-19] (ab275021)

Predicted band size: 23 kDa

Observed band size: 40-50 kDa

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