

Product datasheet

Anti-CD28 antibody [EPR22076] ab243228

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [10 References](#) [9 Images](#)

Overview

Product name	Anti-CD28 antibody [EPR22076]
Description	Rabbit monoclonal [EPR22076] to CD28
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ICC/IF, IP Unsuitable for: Flow Cyt
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Jurkat and EL4.IL-2 whole cell lysate. IHC-P: Human multiple myeloma and tonsil tissue. Mouse and rat spleen tissue. ICC/IF: Jurkat and EL4.IL-2 cells. IP: Jurkat whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR22076

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab243228 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Predicted molecular weight: 25 kDa.
IHC-P	★★★★★ (1)	1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF		1/50.
IP		1/30.

Application notes

Is unsuitable for Flow Cyt.

Target

Function

Involved in T-cell activation, the induction of cell proliferation and cytokine production and promotion of T-cell survival.

Tissue specificity

Expressed in T-cells and plasma cells, but not in less mature B-cells.

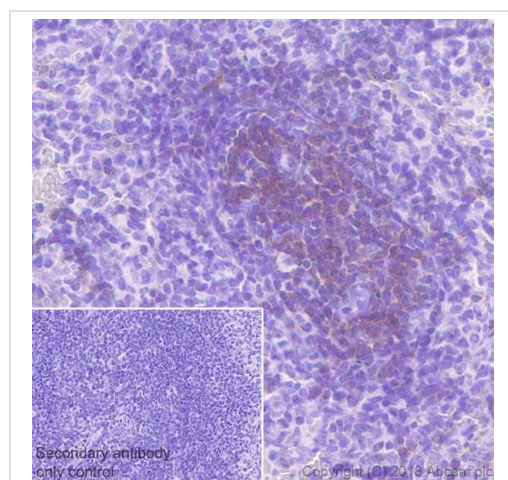
Sequence similarities

Contains 1 Ig-like V-type (immunoglobulin-like) domain.

Cellular localization

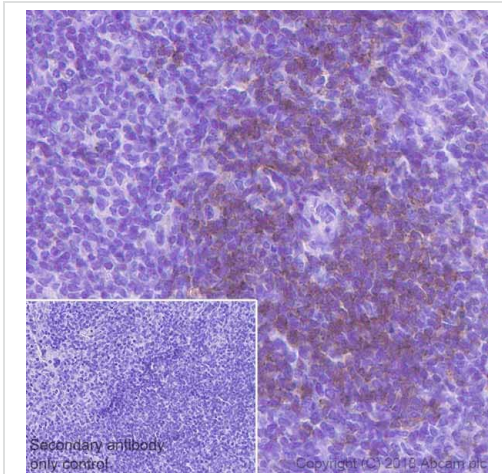
Membrane.

Images



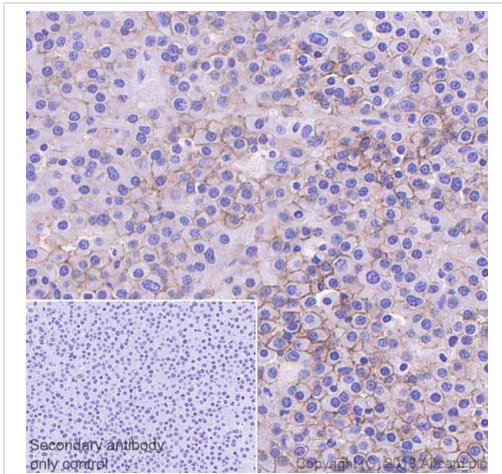
Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling CD28 with ab243228 at 1/2000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Membranous and cytoplasmic staining on subsets of immune cells of rat spleen is observed. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP). Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD28 antibody [EPR22076] (ab243228)



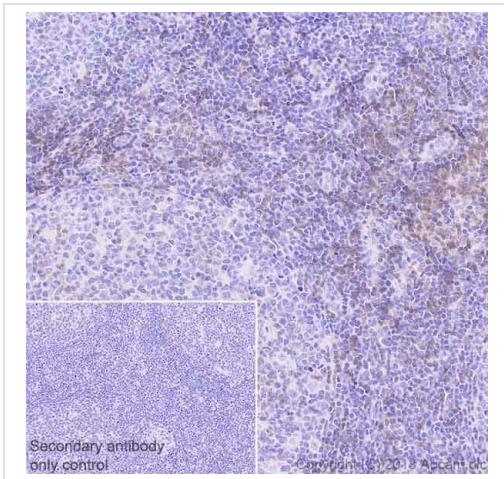
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD28 antibody [EPR22076] (ab243228)

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling CD28 with ab243228 at 1/2000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Membranous and cytoplasmic staining on subsets of immune cells of mouse spleen is observed. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP). Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD28 antibody [EPR22076] (ab243228)

Immunohistochemical analysis of paraffin-embedded human multiple myeloma tissue labeling CD28 with ab243228 at 1/2000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Membranous staining on human Multiple Myeloma cells. (PMID: 7522634) is observed. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP). Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

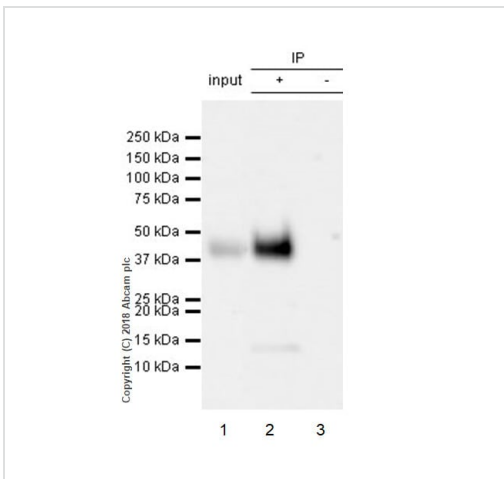


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD28 antibody [EPR22076] (ab243228)

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling CD28 with ab243228 at 1/2000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Membranous and cytoplasmic staining on subsets of immune cells of human tonsil (PMID: 7489738) is observed. Counterstained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).



Immunoprecipitation - Anti-CD28 antibody [EPR22076] (ab243228)

CD28 was immunoprecipitated from 0.35 mg Jurkat (human T cell leukemia T lymphocyte) whole cell lysate with ab243228 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab243228 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/5000 dilution.

Lane 1: Jurkat whole cell lysate 10 µg (Input).

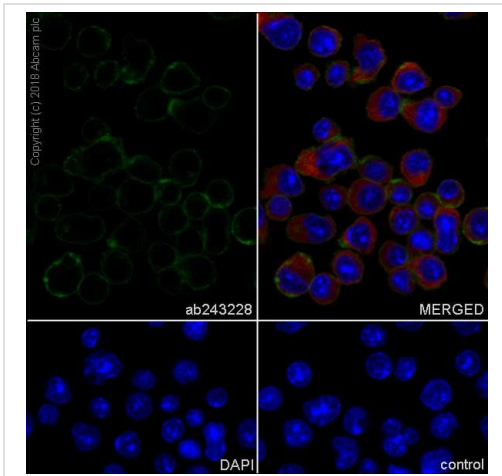
Lane 2: ab243228 IP in Jurkat whole cell lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab243228 in Jurkat whole cell lysate.

Blocking/Dilution buffer: 5% NFDm/TBST.

Exposure time: 30 seconds.

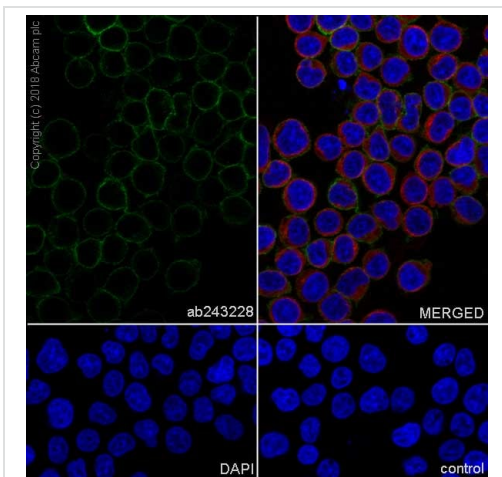
The target band ranging between 37kDa-48kDa is consistent with what has been described in the literature (PMID: 2825196). Minor band below 15kDa is likely to be an isoform.



Immunocytochemistry/ Immunofluorescence - Anti-CD28 antibody [EPR22076] (ab243228)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized EL4.IL-2 (Mouse lymphoma T lymphocyte) cells labeling CD28 with ab243228 at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing membranous staining in EL4.IL-2 cells. The nuclear counter stain is DAPI (blue).

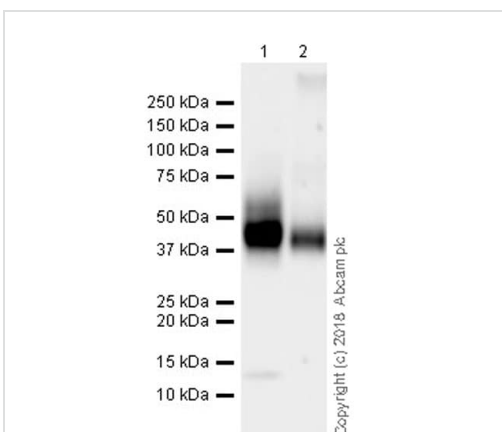
Counterstained with **ab195889** Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at a 1/200 dilution (red). The negative control is the secondary antibody only.



Immunocytochemistry/ Immunofluorescence - Anti-CD28 antibody [EPR22076] (ab243228)

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Counterstained with **ab195889** Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at a 1/200 dilution (red). The negative control is the secondary antibody only.



Western blot - Anti-CD28 antibody [EPR22076] (ab243228)

All lanes : Anti-CD28 antibody [EPR22076] (ab243228) at 1/1000 dilution

Lane 1 : Jurkat (human T cell leukemia T lymphocyte), whole cell lysate

Lane 2 : EL4.IL-2 (mouse lymphoma T lymphocyte), whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : VeriBlot for IP Detection Reagent (HRP) (**ab131366**) at 1/1000 dilution

Predicted band size: 25 kDa

Exposure time: 26 seconds

The target band ranging between 37kDa-48kDa is consistent with what has been described in the literature (PMID: 2825196). Minor band below 15kDa is likely to be an isoform.

This blot was developed using a higher sensitivity ECL substrate.

This primary antibody was incubated overnight at 4°C.

Why choose a recombinant antibody?



- Research with confidence**
Consistent and reproducible results
- Long-term and scalable supply**
Recombinant technology
- Success from the first experiment**
Confirmed specificity
- Ethical standards compliant**
Animal-free production

Anti-CD28 antibody [EPR22076] (ab243228)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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