abcam

ab223292

Anti-CD70 antibody [EPR21946-290]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR21946-290
Purification technique	Affinity purification Protein A
Concentration	0.484 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	1/500
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Target data

See full target information Cd70

Function	Expressed at the plasma membrane of B cells, it is the ligand of the CD27 receptor which is specifically expressed at the surface of T cells. The CD70-CD27 signaling pathway mediates antigen-specific T cell activation and expansion which in turn provides immune surveillance of B cells.

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	CD70 also known as CD27 ligand or CD27L is a type II transmembrane protein with a molecular mass of approximately 30 kDa. It belongs to the tumor necrosis factor (TNF) superfamily and is encoded by the CD70 gene. The expression of CD70 occurs mainly on activated T and B cells dendritic cells and some NK cells but not on resting lymphocytes. In addition CD70 expression is observed in certain malignancies and inflammatory conditions.
Biological function summary	CD70 plays an essential role in the regulation of immune responses. It does this by binding to its receptor CD27 forming a receptor-ligand complex that triggers signaling pathways vital for T cell proliferation survival and differentiation. This interaction also influences the production of immunoglobulins by B cells. CD70-CD27 signaling is particularly important in shaping adaptive immunity enhancing the body's ability to respond to pathogens effectively.
Pathways	CD70 is integral in the activation of the NF-κB and MAPK pathways. These pathways are activated upon the interaction of CD70 with CD27 promoting cell survival proliferation and pro-inflammatory cytokine production. Other proteins related to CD70 through these pathways include TRAF2 and TRAF3 which are essential for downstream signaling events that modulate immune responses.
Associated diseases and disorders	CD70 has been implicated in autoimmune diseases and certain cancers. For instance it plays a role in the pathogenesis of lupus by contributing to abnormal immune activation. Overexpression of CD70 is also associated with various cancers such as renal cell carcinoma where it can support tumor cell growth and immune evasion. Through these conditions CD70 interacts with proteins like BCL-2 in cancer affecting cell survival pathways while its interaction with CD27 influences the immune deregulation seen in lupus.

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.

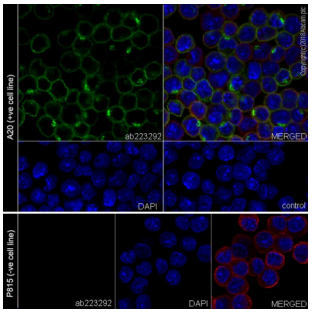
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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:
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2 product images



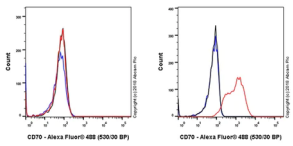
Immunocytochemistry/ Immunofluorescence - Anti-CD70 antibody [EPR21946-290] (ab223292)

CD70 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD70 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized A20 (Mouse reticulum sarcoma cell line) cells labeling CD70 with ab223292 at 1/2,000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1,000 dilution (green).
Confocal image showing membranous staining in A20 cells with distinct staining of the target protein being transported from Golgi to cell surfaces (PMID: 20971706; PMID: 29496042).

Negative control: P815 (PMID: 9620608).

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



Flow Cytometry - Anti-CD70 antibody [EPR21946-290] (ab223292)

CD70 Flow Cytometry staining using rabbit Anti-CD70 antibody

Flow cytometric analysis of P815 (Mouse mastocytoma mast cell, left) and A20 (Mouse reticulum sarcoma cell line, right) cell lines labeling CD70 with ab223292 at 1/500 (red) compared with a Rabbit monoclonal IgG (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2,000 dilution was used as the secondary antibody.
Gated on viable cells.

Negative control: P815.

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