abcam

ab171218

Anti-CD70 antibody [FR70] - Low endotoxin, Azide free

Key facts

Isotype	IgG2b
Host species	Rat
Storage buffer	pH: 7.2 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Carrier free	Yes
Clone number	FR70
Purification technique	Affinity purification
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	0.5 µg for 10^5-10^8 Cells
Notes	A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL.

ab18536 - Rat monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

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 (PubMed:28011863, PubMed:28011864, PubMed:8387892). The CD70-CD27 signaling pathway mediates antigen-specific T cell activation and expansion which in turn provides immune surveillance of B cells (PubMed:28011863, PubMed:28011864).

Storage

Shipped at conditions	Blue Ice
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

Endotoxin Level: Less than 0.001 ng/ug antibody, as determined by the LAL assay.

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

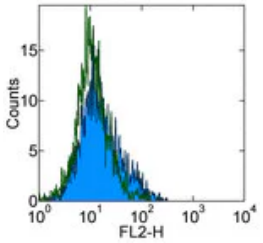
We do not recommend this combination. It is not covered by our product promise.

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.

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1 product image



Flow Cytometry - Anti-CD70 antibody [FR70] - Low endotoxin, Azide free (ab171218)

CD70 Flow Cytometry staining using rat Anti-CD70 antibody

Flow cytometric analysis of 4-day LPS activated BALB/c splenocytes labeling CD70 with 0.25 µg ab171218 (filled histogram) with Rat IgG2b kappa Isotype Control (open histogram) followed by Anti-Rat IgG Biotin and Streptavidin PE. Total viable cells were used for analysis.

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