abcam

ab108482

Anti-CD70 antibody [TAN 1-7]

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Mouse Cd70. The exact immunogen used to generate this antibody is proprietary information. Database link O55237
Clone number	TAN 1-7
Purification technique	Affinity purification Protein A/G
Specificity	This antibody is a non-depleting mAb that blocks the CD70-CD27 interaction.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab18450 - Rat monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

ELISA

Expected

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

ICC/IF

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
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	Blue Ice
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

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.

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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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