abcam

ab234237

FITC Anti-CD86 antibody [GL-1]

Anti-CD86 antibody [GL-1] conjugated to FITC - suitable for flow cytometry, and reacts with mouse samples. Clone [GL-1] is a rat monoclonal antibody and one of the most commonly used clones for flow cytometry.

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Key facts

Isotype	IgG2a
Host species	Rat
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.0975% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Cd86 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P42082
Clone number	GL-1
Purification technique	Size-exclusion chromatography
Light chain type	kappa
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC.

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	1-2 µg/mL
Notes	-

Target data

See full target information Cd86

Function

Costimulatory molecule that belongs to the immunoglobulin superfamily that plays an important role in T-lymphocyte activation (By similarity). Acts as the primary auxiliary signal augmenting the MHC/TCR signal in naive T-cells by acting as a ligand for the CD28 receptor which is constitutively expressed on the cell surface of T-cells (By similarity). May play a critical role in the early events of T-cell activation and costimulation of naive T-cells, such as deciding between immunity and anergy that is made by T-cells within 24 hours after activation (By similarity). Also involved in the regulation of B cells function, plays a role in regulating the level of IgG(1) produced (PubMed:23241883). Upon CD40 engagement, activates NF-kappa-B signaling pathway via phospholipase C and protein kinase C activation (PubMed:23241883). Also acts as an inhibitor of T-cell activation by acting as a ligand for CTLA4, a decoy receptor, thereby blocking CD28-mediated T-cell priming (PubMed:7504059, PubMed:7513726).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze, Store in the dark

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary

CD86 also known as B7-2 is a protein involved in the regulation of the immune response. It has an approximate mass of 70 kDa and is expressed on antigen-presenting cells like dendritic cells monocytes and macrophages. Notably CD86 is

	present on macrophages including those in tissues such as skin and lymphoid organs. Expressed on these cells CD86 serves as a vital mediator in the co-stimulatory signals necessary for T cell activation and survival.
Biological function summary	CD86 plays a significant role in the immune system by providing secondary signals for T cell activation and differentiation. It is a part of the B7 protein family and forms a complex with CD28 and CTLA-4 on T cells. When CD86 binds to CD28 it sends positive co-stimulatory signals which promote T cell proliferation and cytokine production. On the other hand interaction with CTLA-4 transmits an inhibitory signal which reduces immune response. This dual interaction helps to balance immune activation and tolerance.
Pathways	CD86 takes part in important immune-related signaling pathways particularly the T cell receptor signaling pathway and the PI3K-Akt signaling pathway. Both pathways are fundamental for initiating immune responses. CD86's interaction with CD28 activates downstream signaling cascades including PI3K-Akt which is important for cell survival and growth. Additionally CD86 collaborates with other proteins such as CD80 another co-stimulatory molecule to amplify T cell activation within these pathways.
Associated diseases and disorders	CD86 is associated with autoimmune diseases and transplant rejection. In autoimmune diseases like rheumatoid arthritis the overexpression or dysregulation of CD86 can lead to excessive T cell activation causing immune system attacks on the body's own tissues. Similarly in transplant rejection CD86 may contribute by enhancing immune response against transplanted organs. The engagement between CD86 and CD28 is a critical factor in these conditions and therapies targeting this interaction are under exploration to mitigate the immune response.

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

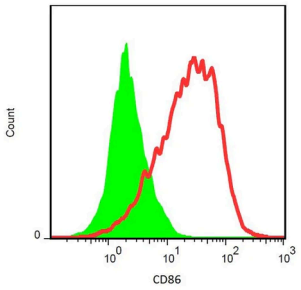
We do not recommend this combination. It is not covered by our product promise.

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.

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1 product image



Flow Cytometry - FITC Anti-CD86 antibody [GL-1] (ab234237)

CD86 Flow Cytometry staining using rat Anti-CD86 antibody

Flow cytometric analysis of PHA-activated murine splenocytes labeling CD86 with ab234237 at 2 µg/ml (red). Surface staining.

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