CD40 Monoclonal Antibody (1C10), APC, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Published Species	Mouse
Host/Isotype	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), APC, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	1C10
Conjugate	APC
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_469386

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.25 µg/test	49 Publications

Product Specific Information

Description: The 1C10 monoclonal antibody reacts with mouse CD40, a 45-50 kDa type I transmembrane glycoprotein. CD40 is a member of the TNFR family and is expressed by mouse B lymphocytes, follicular dendritic cells, thymic epithelium, and a subset of peripheral T cells. CD40 regulates B cell development/maturation by inducing Ig isotype switching and in combination with other signals such as IL-4, protects B cells from surface Ig-induced apoptosis and promotes proliferation. Interaction of CD40 with CD154 (gp39), its ligand on T cells, is important in T-B cell crosstalk and plays a role in costimulation and immune regulation.

The monoclonal antibody 1C10 is reported to have agonistic activity in vitro and in vivo.

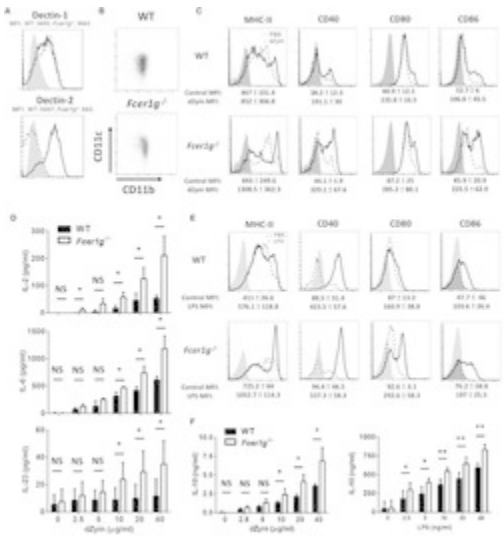
Applications Reported: The 1C10 antibody has been reported for use in flow cytometric analysis.

Applications Tested: The 1C10 antibody has been tested by flow cytometric analysis of mouse splenocytes. This can be used at less than or equal to 0.25 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Excitation: 633-647 nm; Emission: 660 nm; Laser: Red Laser.

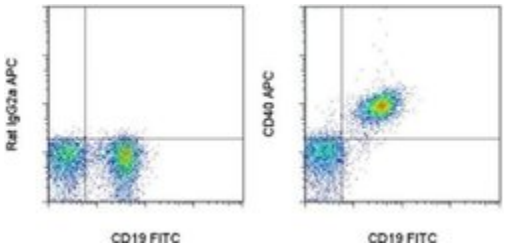
Filtration: 0.2 µm post-manufacturing filtered.

Advanced Verification Data



CD40 Antibody (17-0401-82)
Figure 3 Augmentation of Dectin-1 responses in Fcer1g -/- DCs was not due to quantity and ligand specificity of Dectin-1. BMDCs derived from WT and Fcer1g -/- mice were cultured for 6 days. (A) The expressions of Dectin-1 and Dectin-2 in WT (solid line) and Fcer1g -/- (dash line) BMDCs were determined by flow cytometry with gating on CD11c + cells. The MFIs were indicated in each histogram. Gray areas represented the isotype-matched Ig controls. (B) The expressions of CD11b and CD11c in WT and Fcer1g -/- BMDC cultures were determined by flow cytometry. (C-F) For maturation, WT and Fcer1g -/- BMDCs were incubated with PBS (dash line), depleted zymosan (dZym) (10 ug/mL, solid line) (C) , or LPS (100 ng/mL, solid line) (E) for 16 h. The expressions of MHC-II, CD40, CD80, and CD86 were analyzed by flow cytometry. The changes of MFIs (statistic from three independent experiments) from control to treatment were indicated under each histogram. Gray areas represented the isotype controls. All flow data shown are representative from three independent experiments. For cytokine production, WT and Fcer1g -/- BMDCs were collected and incubated with dZym or LPS for 16 h. The secreted IL-2, IL-6, and IL-23 by dZym-treated BMDCs (D) , and IL-10 by dZym- or LPS-treated BMDCs (F) in supernatants were measured by ELISA. Error bars indicated mean + SD of three independent experiments. The significances * $p < 0.05$, NS, not significant (Student's t -test) were obtained by comparing Fcer1g -/- to W Cell treatment validation info.

Product Images For CD40 Monoclonal Antibody (1C10), APC, eBioscience™



CD40 Antibody (17-0401-82) in Flow
Staining of BALB/c splenocytes with Anti-Mouse CD19 FITC (Product # 11-0193-82) and 0.125 µg of Rat IgG2a K Isotype Control APC (Product # 17-4321-81) (left) or 0.125 µg of Anti-Mouse CD40 APC (right). Total viable cells were used for analysis.

View more figures on thermofisher.com

49 References

Flow Cytometry (49)

Frontiers in cell and developmental biology

Aggregated and Hyperstable Damage-Associated Molecular Patterns Are Released During ER Stress to Modulate Immune Function.

"Published figure using CD40 monoclonal antibody (Product # 17-0401-82) in Flow Cytometry"

Authors: Andersohn A,Garcia MI,Fan Y,Thompson MC,Akimzhanov AM,Abdullahi A,Jeschke MG,Boehning D

Species
Not Applicable

Dilution
Not Cited

Year
2020

Nature communications

Senolytics prevent mt-DNA-induced inflammation and promote the survival of aged organs following transplantation.

"17-0401 was used in Flow cytometry/Cell sorting to show that cell-free mitochondrial DNA (cf-mt-DNA) released by senescent cells accumulates with aging and augments immunogenicity."

Authors: Iske J,Seyda M,Heinbokel T,Maenosono R,Minami K,Nian Y,Quante M,Falk CS,Azuma H,Martin F,Passos JF, Niemann CU,Tchkonia T,Kirkland JL,Elkhal A,Tullius SG

Species
Mouse
Not Applicable

Dilution
1:100
Not Cited

Year
2020

View more Flow references on thermofisher.com

More applications with references on thermofisher.com