

CD40 Monoclonal Antibody (1C10), Functional Grade, 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), Functional Grade, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	1C10
Conjugate	Functional Grade
Form	Liquid
Concentration	1 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	no preservative
Storage conditions	4° C
RRID	AB_468941

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	1 µg/test	31 Publications
Functional Assay (FN)	Assay-Dependent	6 Publications
Miscellaneous PubMed (Misc)	-	1 Publication

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. It has also been reported in in vitro activation of B cells.

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 1 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 10⁵ to 10⁸ cells/test. It is recommended that the

antibody be carefully titrated for optimal performance in the assay of interest.

Storage and handling: Use in a sterile environment.

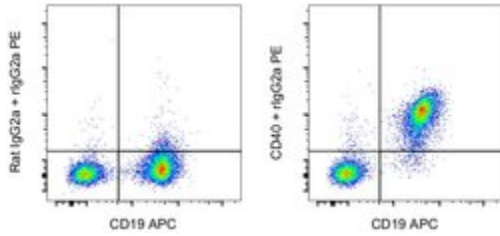
Filtration: 0.2 µm post-manufacturing filtered.

Purity: Greater than 90%, as determined by SDS-PAGE.

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

Aggregation: Less than 10%, as determined by HPLC.

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



CD40 Antibody (16-0401-82) in Flow

BALB/c mouse splenocytes were stained with CD19 Monoclonal Antibody, APC (Product # 17-0193-82) and 1.0 µg of Rat IgG2a kappa Isotype Control (Product # 14-4321-82) (left) or 1.0 µg of CD40 Monoclonal Antibody, Functional Grade (right) followed by IgG2a Monoclonal Antibody, PE (Product # 12-4817-82). Total viable cells, as determined by 7-AAD (product # 00-6993-50), were used for analysis.

[View more figures on thermofisher.com](https://www.thermofisher.com)

Flow Cytometry (31)

Nature communications

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

"Published figure using CD40 monoclonal antibody (Product # 16-0401-82) in Flow Cytometry"

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, Tchkonja T, Kirkland JL, Elkhail A, Tullius SG

Species
Not Applicable

Dilution
Not Cited

Year
2020

Cell

A Genetic Map of the Response to DNA Damage in Human Cells.

"16-0401-82 was used in Flow Cytometry to provide a rich resource to study this fundamental cellular system and has implications for the development and use of genotoxic agents in cancer therapy."

Authors: Olivieri M, Cho T, Álvarez-Quilón A, Li K, Schellenberg MJ, Zimmermann M, Hustedt N, Rossi SE, Adam S, Melo H, Heijink AM, Sastre-Moreno G, Moatti N, Szilard RK, McEwan A, Ling AK, Serrano-Benitez A, Ubhi T, Feng S, Pawling J, Delgado-Sainz I, Ferguson MW, Dennis JW, Brown GW, Cortés-Ledesma F, Williams RS, Martin A, Xu D, Durocher D

Species
Mouse

Dilution
Not Cited

Year
2020

[View more Flow references on thermofisher.com](#)

Functional Assay (6)

Nature communications

Vaccine elicitation of HIV broadly neutralizing antibodies from engineered B cells.

"16-0401 was used in Functional assays to show that HIV bnAb-engineered primary mouse B cells can be adoptively transferred and vaccinated in immunocompetent mice resulting in the expansion of durable bnAb memory and long-lived plasma cells."

Authors: Huang D, Tran JT, Olson A, Vollbrecht T, Tenuta M, Guryleva MV, Fuller RP, Schiffner T, Abadejos JR, Couvrette L, Blane TR, Saye K, Li W, Landais E, Gonzalez-Martin A, Schief W, Murrell B, Burton DR, Nemazee D, Voss JE

Species
Mouse

Dilution
Not Cited

Year
2020

Nature communications

Clec4A4 is a regulatory receptor for dendritic cells that impairs inflammation and T-cell immunity.

"16-0401 was used in Functional assays to investigate how Clec4A4 controls immune responses, showing that it is a regulatory receptor for dendritic cells that impairs inflammation and T-cell immunity."

Authors: Uto T, Fukaya T, Takagi H, Arimura K, Nakamura T, Kojima N, Malissen B, Sato K

Species
Mouse

Dilution
Not Cited

Year
2016

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More applications with references on thermofisher.com

Misc (1)

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