

## PE/Cyanine7 anti-human CD40 Antibody

<b>Catalog# / Size</b>	334321 / 25 tests 334322 / 100 tests
<b>Clone</b>	5C3
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	V CD40.4
<b>Other Names</b>	BP50, TNFRSF5
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	CD40 is a 48 kD type I glycoprotein also known as BP50. It is a member of the TNFR superfamily primarily expressed on B cells, macrophages, follicular dendritic cells, endothelial cells, fibroblasts, and at low levels on plasma cells. CD40 has been reported to be involved in B cell differentiation, costimulation, isotype class-switching, and protection of B cells from apoptosis. Additionally, CD40 is important for T cell-B cell interactions. The ligand of CD40 is CD154 (CD40 ligand). The 5C3 antibody has been reported to promote B cell proliferation in the presence of anti-IgM, IL-4 or PMA, partially blocking CD40 binding to CD40L, and B cells rescue from apoptosis.

### Product Details

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<b>Verified Reactivity</b>	Human, Cynomolgus, Rhesus
<b>Reported Reactivity</b>	Baboon, Chimpanzee, Squirrel Monkey
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with PE/Cyanine7 under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: costimulation of B cell proliferation <sup>1</sup> , partial inhibition of CD40 binding to CD40L <sup>3</sup> , and B cell rescue from apoptosis <sup>1</sup> . The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays.
<b>Additional Product Notes</b>	BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact <a href="#">Technical Service</a> if you have any questions.
<b>Application References</b>	1. Schlossman SF, <i>et al.</i> 1995. ed. Leukocyte Typing V:White Cell Differentiation Antigens. New York:Oxford University Press. 2. Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC) 3. Pound JD, <i>et al.</i> 1999. <i>Int. Immunol.</i> 11:11.
<b>(PubMed link indicates BioLegend citation)</b>	

4. Shey MS, *et al.* 2014. *J Immunol.* 192:4833. [PubMed](#)
5. Sondergaard JN, *et al.* 2014. *Mol Immunol.* 59:180. [PubMed](#)
6. Saiki O, *et al.* 1995. *J Clin. Invest.* 2: 510-4 (Costim)

## Product Citations

1. Carre C, *et al.* 2021. *iScience.* 24:102970. [PubMed](#)
2. Findlay EG, *et al.* 2019. *Oncoimmunology.* 8:1608106. [PubMed](#)
3. Ziebart A, *et al.* 2018. *Oncotarget.* 9:5834. [PubMed](#)
4. Mehta AK, *et al.* 2021. *Nat Cancer.* 2:66. [PubMed](#)
5. Grandclaudon M, *et al.* 2019. *Cell.* 179:432. [PubMed](#)
6. Nowak W, *et al.* 2020. *EBioMedicine.* 50:290-305. [PubMed](#)
7. van Doorn CLR, *et al.* 2021. *Front Immunol.* 12:712021. [PubMed](#)
8. Rusconi M, *et al.* 2017. *Sci Rep.* 5.745138889. [PubMed](#)
9. Mysore V, *et al.* 2021. *Med (N Y).* 2:1050. [PubMed](#)

## RRID

AB\_10643414 (BioLegend Cat. No. 334321)  
 AB\_10645472 (BioLegend Cat. No. 334322)

## Antigen Details

<b>Structure</b>	TNFR superfamily, type I glycoprotein, 48 kD
<b>Distribution</b>	B cells, macrophages, follicular dendritic cells, endothelial cells, fibroblasts
<b>Function</b>	B cell differentiation, costimulation, isotype class-switching, rescues B cells from apoptosis
<b>Ligand/Receptor</b>	CD154 (CD40 ligand)
<b>Cell Type</b>	B cells, Dendritic cells, Endothelial cells, Fibroblasts, Macrophages
<b>Biology Area</b>	Cell Biology, Costimulatory Molecules, Immunology, Neuroscience, Neuroscience Cell Markers
<b>Molecular Family</b>	CD Molecules
<b>Antigen References</b>	1. Banchereau J, <i>et al.</i> 1994. <i>Annu. Rev. Immunol.</i> 12:881. 2. Foy T, <i>et al.</i> 1996. <i>Annu. Rev. Immunol.</i> 14:591.
<b>Gene ID</b>	<a href="#">958</a>

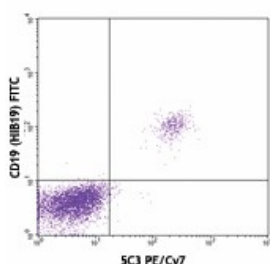
## Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

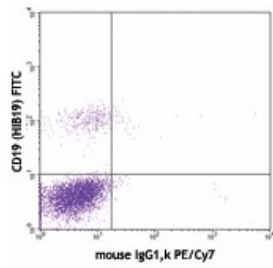
## Other Formats

Alexa Fluor® 488 anti-human CD40, Purified anti-human CD40, FITC anti-human CD40, PE anti-human CD40, APC anti-human CD40, Alexa Fluor® 647 anti-human CD40, PerCP/Cyanine5.5 anti-human CD40, Pacific Blue™ anti-human CD40, PE/Cyanine7 anti-human CD40, APC/Cyanine7 anti-human CD40, Alexa Fluor® 700 anti-human CD40, Purified anti-human CD40 (Maxpar® Ready), Brilliant Violet 510™ anti-human CD40, Brilliant Violet 421™ anti-human CD40, Brilliant Violet 711™ anti-human CD40, Brilliant Violet 605™ anti-human CD40, Brilliant Violet 650™ anti-human CD40, Brilliant Violet 785™ anti-human CD40, PE/Dazzle™ 594 anti-human CD40, Biotin anti-human CD40, APC/Fire™ 750 anti-human CD40, TotalSeq™-A0031 anti-human CD40, TotalSeq™-C0031 anti-human CD40, Ultra-LEAF™ Purified anti-human CD40, TotalSeq™-B0031 anti-human CD40, TotalSeq™-D0031 anti-human CD40, PE/Fire™ 810 anti-human CD40

## Product Data



Human peripheral blood lymphocytes stained with CD19 (HIB19) FITC and 5C3 PE/Cyanine7 (top) or mouse IgG1, κ PE/Cyanine7 isotype control (bottom)



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