

Purified anti-human CD40 Antibody

Catalog# / Size	334302 / 100 µg
Clone	5C3
Regulatory Status	RUO
Workshop	V CD40.4
Other Names	BP50, TNFRSF5
Isotype	Mouse IgG1, κ
Description	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

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	Baboon, Chimpanzee, Squirrel Monkey
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested Costim - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is ≤0.125 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Additional reported applications (for the relevant formats) include: costimulation of B cell proliferation ¹ , partial inhibition of CD40 binding to CD40L ³ , and B cell rescue from apoptosis ¹ . The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays.
Application References	<ol style="list-style-type: none">Schlossman SF, <i>et al.</i> 1995. ed. Leukocyte Typing V:White Cell Differentiation Antigens. New York:Oxford University Press.Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC)Pound JD, <i>et al.</i> 1999. <i>Int. Immunol.</i> 11:11.Shey MS, <i>et al.</i> 2014. <i>J Immunol.</i> 192:4833. PubMedSondergaard JN, <i>et al.</i> 2014. <i>Mol Immunol.</i> 59:180. PubMedSaiki O, <i>et al.</i> 1995. <i>J Clin. Invest.</i> 2: 510-4 (Costim)
Product Citations	<ol style="list-style-type: none">Silvin A, <i>et al.</i> 2020. <i>Cell.</i> 182:1401. PubMedTanner MR, <i>et al.</i> 2019. <i>Arthritis Res Ther.</i> 21:6. PubMedTrotta A, <i>et al.</i> 2018. <i>Front Immunol.</i> 1.069444444. PubMedMask E, <i>et al.</i> 2022. <i>Front Cell Infect Microbiol.</i> 12:880860. PubMed

5. Heesters BA, *et al.* 2021. J Exp Med. 218:. [PubMed](#)
6. Bruno TC, *et al.* 2017. Cancer Immunol Res. 0.831944444. [PubMed](#)
7. Eccles JD, *et al.* 2020. Cell Rep. 30:351. [PubMed](#)
8. Warncke M, *et al.* 2012. J Immunol. 188:4405. [PubMed](#)
9. Lee-Chang C, *et al.* 2021. J Exp Med. 218:. [PubMed](#)
10. Zimmerman MG, *et al.* 2018. Cell Host Microbe. 24:731. [PubMed](#)

RRID AB_1236384 (BioLegend Cat. No. 334302)

Antigen Details

Structure	TNFR superfamily, type I glycoprotein, 48 kD
Distribution	B cells, macrophages, follicular dendritic cells, endothelial cells, fibroblasts
Function	B cell differentiation, costimulation, isotype class-switching, rescues B cells from apoptosis
Ligand/Receptor	CD154 (CD40 ligand)
Cell Type	B cells, Dendritic cells, Endothelial cells, Fibroblasts, Macrophages
Biology Area	Cell Biology, Costimulatory Molecules, Immunology, Neuroscience, Neuroscience Cell Markers
Molecular Family	CD Molecules
Antigen References	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.
Gene ID	958

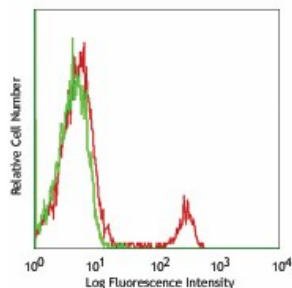
Related Protocols

[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 purified 5C3, followed by anti-mouse IgG FITC

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