

Anti-Human CD40 Antibody, Clone 5C3, FITC



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Antibodies

Mouse monoclonal IgG1 antibody
against human, rhesus, cynomolgus
CD40, FITC-conjugated

Catalog #60113FI
#60113FI.1

100 Tests 5 µL/test
25 Tests 5 µL/test

Product Description

The 5C3 antibody reacts with CD40, a 45 - 50 kDa type I transmembrane glycoprotein that is a member of the tumor necrosis factor receptor (TNFR) superfamily. CD40 plays an important role in B cell development and is also involved in the process of B cell selection in germinal centers. It facilitates T cell-B cell interactions for co-stimulation and immune regulation through engagement with CD154 (gp39), the CD40 ligand expressed on T cells. In the presence of IL-4 or other stimuli, CD40 promotes B cell proliferation, induces immunoglobulin-(Ig) isotype class switching, and rescues B cells from surface Ig-induced apoptosis. CD40 is expressed on the surface of B cells, follicular dendritic cells, macrophages, fibroblasts, keratinocytes, endothelial cells, basal epithelial cells, CD34+ hematopoietic progenitor cells, and primary carcinomas. It is expressed at low levels, or not at all, on plasma cells. The 5C3 antibody has been used for the activation of B cells in in vitro functional assays, or, if in the presence of IL-4 or phorbol esters, for the induction of B cell proliferation.

Target Antigen Name:	CD40
Alternative Names:	B cell surface antigen CD40, Bp50, CD40L receptor, CDw40, HIGM1, IGM, IMD3, Nerve growth factor receptor-related B lymphocyte activation molecule, p50, TBAM, TNFRSF5, TRAP, Tumor necrosis factor receptor superfamily member 5
Gene ID:	958
Species Reactivity:	Human, Rhesus, Cynomolgus, Baboon, Chimpanzee, Squirrel Monkey
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	5C3
Isotype:	IgG1, kappa
Immunogen:	Recombinant full length human CD40
Conjugate:	FITC (Fluorescein isothiocyanate)

Applications

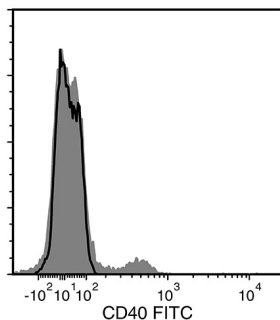
Verified:	FC
Reported:	FC

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin
Purification:	The antibody was purified by affinity chromatography and conjugated with FITC under optimal conditions. The solution is free of unconjugated FITC.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com .
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤ 5 µL per 1 x 10 ⁶ cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each application.

Data



Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs; gated on lymphocytes) labeled with Anti-Human CD40 Antibody, Clone 5C3, FITC (filled histogram) or Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, FITC (Catalog #60070FI) (solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

- Chiappini N et al. (2015) Innate response activator (IRA) B cells reside in human tonsils and internalize bacteria in vitro. *PLoS One* 10(6): e0129879. (FC)
- Martner A et al. (2015) Histamine promotes the development of monocyte-derived dendritic cells and reduces tumor growth by targeting the myeloid NADPH oxidase. *J Immunol* 194(10): 5014–21. (FC)
- Nouri-Shirazi M et al. (2015) Nicotine exposure alters the mRNA expression of Notch ligands in dendritic cells and their response to Th1-/Th2-promoting stimuli. *Scand J Immunol* 81(2): 110–20. (FC)
- Pizzurro GA et al. (2015) Cytokine-enhanced maturation and migration to the lymph nodes of a human dying melanoma cell-loaded dendritic cell vaccine. *Cancer Immunol Immunother* 64: 1393–406. (FC)
- Takakura K et al. (2015) Prognostic markers for patient outcome following vaccination with multiple MHC Class I/II-restricted WT1 peptide-pulsed dendritic cells plus chemotherapy for pancreatic cancer. *Anticancer Res* 35(1): 555–62. (FC)
- Himmerich H et al. (2014) Modulation of cytokine production by drugs with antiepileptic or mood stabilizer properties in anti-CD3- and anti-Cd40-stimulated blood in vitro. *Oxid Med Cell Longev* 2014: 806162. (FA)
- Škrnjug I et al. (2014) Cyclic GMP-AMP displays mucosal adjuvant activity in mice. *PLoS One* 9(10): e110150. (FC)
- Wijewardana V et al. (2014) Accumulation of functionally immature myeloid dendritic cells in lymph nodes of rhesus macaques with acute pathogenic simian immunodeficiency virus infection. *Immunology* 143(2): 146–54. (FC)
- Heninger AK et al. (2013) Activation of islet autoreactive naïve T cells in infants is influenced by homeostatic mechanisms and antigen-presenting capacity. *Diabetes* 62(6): 2059–66. (FC)
- Lowe M et al. (2012) A novel monoclonal antibody to CD40 prolongs islet allograft survival. *Am J Transplant* 12(8): 2079–87. (FC)
- Warncke M et al. (2012) Different adaptations of IgG effector function in human and nonhuman primates and implications for therapeutic antibody treatment. *J Immunol* 188(9): 4405–11. (FC)
- Yoshino N et al. (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of cynomolgus monkeys (*Macaca fascicularis*) by using anti-human cross-reactive antibodies. *Exp Anim* 49(2): 97–110. (FC)
- Pound JD et al. (1999) Minimal cross-linking and epitope requirements for CD40-dependent suppression of apoptosis contrast with those for promotion of the cell cycle and homotypic adhesions in human B cells. *Int Immunol* 11(1): 11–20. (FA/Blocking)
- Schlossman S et al. (Eds.). (1995) *Leucocyte Typing V: White cell differentiation antigens*. New York: Oxford University Press.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2017 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, and Scientists Helping Scientists are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. Alexa Fluor® is a registered trademark of Life Technologies Corporation. Antibodies conjugated to Alexa Fluor® are licensed for internal research use only and sale is expressly conditioned on the buyer not using the antibody for manufacturing, performing a service or medical test, or otherwise generating revenue. For use other than research, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@lifetech.com. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.