

Monoclonal Antibody to CD40 - FITC

Alternate names:	B-cell surface antigen CD40, Bp50, CD40L receptor, CDw40, TNFRSF5, Tumor necrosis factor receptor superfamily member 5
Catalog No.:	AM08042FC-N
Quantity:	0.5 mg
Concentration:	0.5 mg/ml
Background:	CD40 is a type I cell surface protein belonging to the tumor necrosis factor superfamily of cell surface receptors. In mice it is expressed on B lineage cells, follicular dendritic cells, thymic epithelium, and interdigitating cells in the T-cell zone of secondary lymphoid organs. (Ref.1-5) CD40 first becomes detectable on a subset of small pre-B II cells in bone marrow, with the levels of CD40 expression increasing thereafter during B-cell maturation. Immature B cells (IgM+IgDloB220lo) express intermediate levels of CD40, whereas mature B cells (IgM+IgDhiB220hi) express high levels. (Ref.4) CD40 has a central role in B cell growth and differentiation, and signalling through CD40 in combination with IL-4 reportedly induces immunoglobulin isotype switching and secretion of IgE. (Ref.6) The agonistic 1C10 antibody closely resembles gp39/CD40 ligand in its ability to stimulate proliferation of small, resting B lymphocytes in the absence of other cofactors. (Ref.2)
Uniprot ID:	P27512
NCBI:	NP_035741.2
GeneID:	21939
Host / Isotype:	Rat / IgG2a
Clone:	1C10
Format:	State: Liquid purified Ig fraction. Buffer System: PBS containing 0.09% Sodium Azide as preservative. Label: FITC – Fluorescein Isothiocyanate Isomer 1
Applications:	Flow Cytometry: < / 2 µg/10e6 cells. (Ref.2) Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody is specific to Mouse CD40 (Mr. 45-50 kDa) Species: Mouse. Other species not tested.
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing. Shelf life: one year from despatch.

- General Readings:**
1. Santos-Argumedo, L., J. Gordon, A.W. Heath, and M. Howard. 1994. Cell. Immunol. 156:272.
 2. Heath, A.W., W.W. Wu, and M.C. Howard. 1994. Eur. J. Immunol. 24:1828.
 3. Hasbold, J., C. Johnson-Leger, C.J. Atkins, E.A. Clark, and G.G. Klaus. 1994. Eur. J. Immunol. 24:1835.
 4. Grandien, A., A. Bras, and C. Martinez. 1996. Scand. J. Immunol. 43:47.
 5. Noelle, R.J., J.A. Ledbetter, and A. Aruffo. 1994. Immunol. Today 13:431.
 6. Clark, E.A., and J.A. Ledbetter. 1994. Nature 367:425.

Pictures: **Immunofluorescent Staining:** Cells from BALB/c spleen were stained with Rat anti-Mouse CD40-FITC and Hamster anti CD3e-PE (clone 145-2C11), gated on small lymphocytes and analyzed on a FACScan(TM) flow cytometer (BDIS, San Jose, CA). Amount Used: 2 µg/10e6 cells.

