

Anti-CD40 antibody, mouse monoclonal (5C3)

Product code	72-030
Size	100 µg
Storage	-20°C
Concentration	1.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from hybridoma cell culture medium
Immunogen	Recombinant extracellular domain of CD40
Isotype	Mouse IgG1κ
Reactivity	Human
Special notes	N/A
Application	<ol style="list-style-type: none"> 1. Flow cytometry 2. Immunofluorescence staining and Immunocytochemistry (1/100) 3. Immunohistochemistry (acetone or zinc-fixed or frozen section; indirect immuno-staining) (1/100) 4. Stimulation of proliferation of B cell and dendritic cells (20µg/ml). Enhancement of proinflammatory cytokine production in human monocytes, such as TNF-α, IL-6 and IL-8
Background	<p>CD40 is a 45-50-kDa glycoprotein belonging to the tumor necrosis factor (TNF) receptor superfamily. CD40 is specifically expressed on the surface of B cells and specialized antigen-presenting cells such as dendritic cells and macrophages. CD40 interacts with the CD40 ligand (CD154) which is found primarily on T cells, playing a role in both humoral and cell-mediated immune responses. Activation of CD40 on B cells by CD40 ligand causes B cell proliferation, differentiation, immunoglobulin isotype switching, germinal center formation, and stimulation of the humoral memory response. CD40 has been found to mediate a broad variety of immune and inflammatory responses. Within the cell, the CD40 molecule acts as a transmembrane signal transducer that leads to activation of intracellular kinases and transcription factors.</p>
Data Link	UniProtKB P25942 (TNR5_HUMAN)
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	

Data Images: 72-030 Anti-CD40 antibody, mouse monoclonal (5C3)

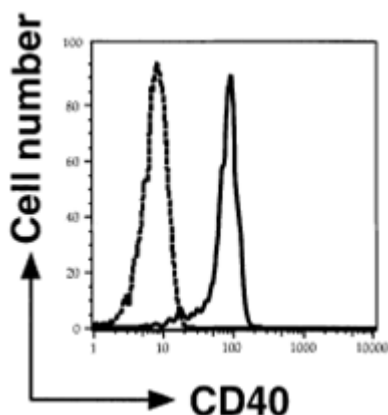


Fig.1 Expression of CD40 on the cell surface of monocyte derived dendric cells as analyzed by Flow Cytometry with anti-CD40 antibody (5C3).

Monocyte-derived dendric cells from healthy adult donor were stained with anti-hCD40 antibody (solid line) or with isotype control (broken line).

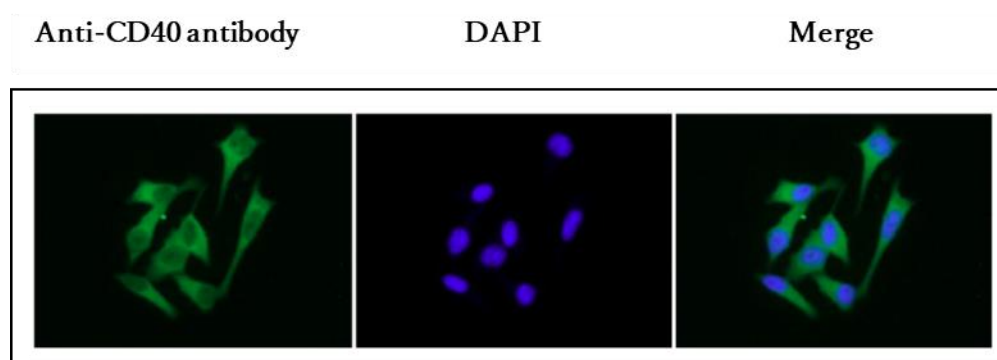


Fig.2 Immunofluorescent staining of CD40 in MCF7 cells with anti-CD40 antibody (5C3)

Cells were fixed in 4% paraformaldehyde and permeabilized in 0.25% Triton X-100.

Anti-CD40 was used at 1/100 dilution and as 2nd antibody, Alex 488 conjugated goat anti-mouse IgG was used at 1/1,000 dilution. DNA was stained with DAPI.

Related Products:

72-031 anti-CD40 antibody (5C3), Biotin-conjugated.

72-032 anti-CD40 antibody (5C3), FITC-conjugated.

References: This antibody is used in ref.2 and 3.

1. Inui S *et al* (1990) "Identification of the intracytoplasmic region essential for signal transduction through a B cell activation molecule, CD40." *Eur J Immunol* **20**: 1747-1753 PMID: [1698631](https://pubmed.ncbi.nlm.nih.gov/1698631/) **FC, Stimulation of B cell proliferation.**

2. Yasui T *et al* (2002) “Dissection of B cell differentiation during primary immune responses in mice with altered CD40 signals.” *Int Immunol* **14**: 319-329 PMID: [11867568](#) **FC**
3. Ishida I *et al* (2003) “Involvement of CD100, a lymphocyte semaphoring, in the activation of the human immune system via CD72: implications for the regulation of immune and inflammatory responses.” *Int Immunol.* **15**: 1027-1034 PMID: [12882840](#) **FC, Stimulation of B cell proliferation.**