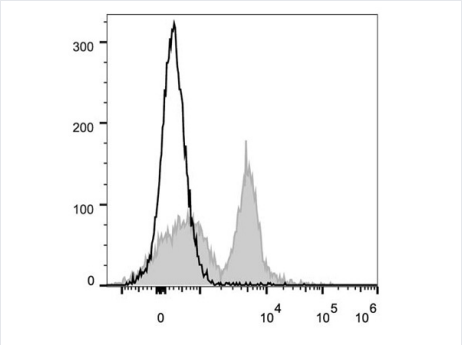
CD40 Antibody – Rat Monoclonal

PRODUCT OVERVIEW

Product Name	CD40, Monoclonal Antibody
Full Product Name	Anti-Mouse CD40 Monoclonal Antibody (PE/Cyanine5 Conjugated) [FGK4.5/FGK45]
Product Gene Name	anti-CD40 antibody
Product Synonym Gene Name	Mouse CD40
Product Synonym Names	Tumor necrosis factor receptor superfamily member 5; Cd40; B-cell surface antigen CD40; Bp50; CD40L receptor; CD40; Tnfrsf5
Clonality	Monoclonal
Isotype	IgG2a, kappa
Clone Number	FGK4.5/FGK45
Host	Rat
Species Reactivity	Mouse
Form/Format	PBS with 0.05% Proclin300, 1% BSA
Concentration	0.5 mg/mL (lot specific)
Preparation and Storage	Store at 2-8 degree C and protect from prolonged exposure to light. Do not freeze.
Matching Pairs	Antibody: CD40 (MBS2558207) Isotype Control: IgG2a Clone #2A3 (MBS2557858)
3D Structure	ModBase 3D Structure for P27512
Conjugation	PE/Cyanine5
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-CD40 antibody	Flow Cytometry (FC/FACS)
Application Notes for anti-CD40 antibody	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 <= 2 ug per 10^6 cells in 100 ul volume or 100 ul of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
Related Product Information for anti-CD40 antibody	CD40 is a 48 kD type I transmembrane glycoprotein also known as Bp50. It is a member of the tumor necrosis factor receptor (TNFR) superfamily and is expressed on B cells, basal epithelial cells, macrophages, follicular dendritic cells, endothelial cells, and a subset of CD34+ hematopoietic progenitors. CD40 regulates B cell development/maturation, Ig isotype switching and, in combination with other signals such as IL-4, protects B cells from surface Ig-induced apoptosis and promotes proliferation. Interaction of CD40 with its ligand CD154 (gp39), which is expressed on activated T cells, is important in costimulation and immune regulation.
Other Notes	Small volumes of anti-CD40 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CD40 purchase	MBS2558207 is an antibody targeting CD40. Also known as Anti-Mouse CD40 Monoclonal Antibody (PE/Cyanine5 Conjugated) [FGK4.5/FGK45]. Reactive in Mouse. Host: Rat.



Flow Cytometry (FC/FACS) of anti-CD40 antibody
C57BL/6 murine splenocytes are stained with Anti-Mouse CD40 Monoclonal Antibody(PE/Cyanine5 Conjugated)(filled gray histogram). Unstained splenocytes (empty black histogram) are used as control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD40. It may not necessarily be applicable to this product.

NCBI GI #	172046819
NCBI GeneID	21939
NCBI Accession #	P27512.3
UniProt Primary Accession #	P27512
UniProt Related Accession #	P27512
NCBI Official Full Name	Tumor necrosis factor receptor superfamily member 5
NCBI Official Synonym Full Names	CD40 antigen
NCBI Official Symbol	Cd40
NCBI Official Synonym Symbols	IGM; p50; Bp50; GP39; IMD3; TRAP; HIGM1; T-BAM; Tnfrsf5; AI326936
UniProt Protein Name	Tumor necrosis factor receptor superfamily member 5
UniProt Synonym Protein Names	B-cell surface antigen CD40; Bp50; CD40L receptor; CD_antigen: CD40
Protein Family	Tumor necrosis factor receptor superfamily
UniProt Gene Name	Cd40
UniProt Synonym Gene Names	Tnfrsf5
UniProt Entry Name	TNR5_MOUSE
NCBI Protein Information	tumor necrosis factor receptor superfamily member 5

UniProt Comments for CD40	CD40: a member of the TNF-receptor superfamily. This receptor for CD40L mediates a broad variety of immune and inflammatory responses including T cell-dependent immunoglobulin class switching, memory B cell development, and germinal center formation. Defects in CD40 are the cause of hyper-IgM immunodeficiency type 3 (HIGM3). HIGM3 is an autosomal recessive disorder which includes an inability of B cells to undergo isotype switching, one of the final differentiation steps in the humoral immune system, an inability to mount an antibody-specific immune response, and a lack of germinal center formation. Two alternatively spliced isoforms have been reported. Isoform I is a type I membrane protein; isoform II is secreted. Protein type: Membrane protein, integral; Receptor, cytokine Cellular Component: extracellular space; cell surface; membrane; intracellular membrane-bound organelle; cell; cytoplasm; integral to membrane; plasma membrane; extracellular region; external side of plasma membrane Molecular Function: protein binding; enzyme binding; ubiquitin protein ligase binding; antigen binding Biological Process: positive regulation of isotype switching to IgG isotypes; regulation of immune response; B cell activation; immune system process; positive regulation of interleukin-12 production; immune response-regulating cell surface receptor signaling pathway; activation of NF-kappaB transcription factor; cellular calcium ion homeostasis; positive regulation of MAP kinase activity; positive regulation of tyrosine phosphorylation of Stat1 protein; protein kinase B signaling cascade; positive regulation of B cell proliferation; positive regulation of transcription from RNA polymerase II promoter; positive regulation of protein amino acid phosphorylation; inflammatory response; defense response to virus; regulation of immunoglobulin secretion
Research Articles on CD40	**1.** We found that mouse thymic dendritic cells undergo maturation following cognate interaction with self-reactive CD4(+) thymocytes and that this maturation is dependent on CD40 signaling
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