

Mouse Anti-Human CD80 Molecule Monoclonal Antibody

Cat. No. CAB11503MH Lot. No. (See product label)

SPECIFICATION

Product Overview Mouse monoclonal antibody to human CD80 molecule.

Species Human

Source Mouse

Antigen Description

The B-lymphocyte activation antigen B7-1 (referred to as B7), also known as CD80, is a member of cell surface immunoglobulin superfamily and is expressed on the surface of antigen-presenting cells including activated B cells, macrophages and dendritic cells. As costimulatory ligands, B7-1 which exists predominantly as dimer and the related protein B7-2, interact with the costimulatory receptors CD28 and cytotoxic T lymphocyte-associated antigen 4 (CTLA-4) expressed on T cells, and thus constitute one of the dominant pathways that regulate T cell activation and tolerance, cytokine production, and the generation of CTL. Binding of this protein with CTLA-4 is involved in down-regulation of immune response. Recent study has revealed that contacts between B and T helper cells mediated by CD80 provide negative signal for the proliferation and IgG secretion of normal B cells and B cell lymphomas. In addition, B7-1 also plays a role in induction of innate immune responses by activating NF- κ B-signaling pathway in macrophages. CD80 is thus regarded as promising therapeutic targets for autoimmune diseases and various carcinomas.

Specificity

Human CD80 / B7-1. No cross-reactivity in ELISA with Human CD28, Human B7-2, Human B7-H1, Mouse B7-H2, Human PDL2, Human cell lysate (293 cell line).

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Immunogen	Recombinant Human CD80 / B7-1 Protein
Isotype	Mouse IgG1
Clone	3G2D5
Purification	Protein A affinity chromatography
Applications	Western Blot; ELISA
Dilution	<p>Western blot : This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect Human B7-1 in WB. Using a DAB detection system, the detection limit for Human B7-1 is approximately 20 ng/lane under non-reducing conditions and 1 ng/lane under reducing conditions. Direct ELISA: This antibody can be used at 0.5 - 1 µg with the appropriate secondary reagents to detect Human B7-1. The detection limit for Human B7-1 is approximately 0.00975 ng/well.</p>
Preparation	<p>This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, human cell-derived, recombinant Human CD80 / B7-1. The IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography.</p>
Format	0.2 µm filtered solution in PBS with 5% trehalose
Storage	<p>This antibody can be stored at 2-8 °C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 °C to -70 °C. Preservative-Free. Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.</p>

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GENE INFORMATION

Gene Name CD80 CD80 molecule [Homo sapiens]

Official Symbol CD80

Synonyms CD80; CD80 molecule; CD28LG, CD28LG1, CD80 antigen (CD28 antigen ligand 1, B7 1 antigen) ,CD80 molecule; T-lymphocyte activation antigen CD80; B lymphocyte activation antigen B7; B7 1; B7.1; activation B7-1 antigen; costimulatory factor CD80; CTLA-4 counter-receptor B7.1; B-lymphocyte activation antigen B7; costimulatory molecule variant IgV-CD80; CD80 antigen (CD28 antigen ligand 1, B7-1 antigen); B7; BB1; B7-1; LAB7; CD28LG; CD28LG1;

Gene ID 941

mRNA Refseq NM_005191

Protein Refseq NP_005182

MIM 112203

UniProt ID P33681

Chromosome Location 3q13.3-q21

Pathway Adaptive Immune System, organism-specific biosystem; Allograft rejection, organism-specific biosystem; Allograft rejection, conserved biosystem; Autoimmune thyroid disease, organism-specific biosystem; Autoimmune thyroid disease, conserved biosystem; CD28 co-stimulation, organism-specific biosystem; CD28 dependent PI3K/Akt signaling, organism-specific biosystem;

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Function

coreceptor activity; protein binding; receptor activity;

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