

Product Information

Monoclonal Anti-CD40

Clone 82105

Purified Mouse Immunoglobulin

Product Number **C 5987**

Product Description

Monoclonal Anti-Human CD40 (mouse IgG2B) is developed in mouse using purified recombinant human CD40 extracellular domain expressed in mouse myeloma NSO cells as immunogen. The antibody is purified from the IgG fraction of the ascites fluid using Protein G affinity chromatography.

Monoclonal Anti-Human CD40 recognizes recombinant human CD40 by ELISA and immunoblotting. In ELISAs, this antibody shows less than 1% cross-reactivity with recombinant mouse CD40. The antibody also shows less than 1% cross-reactivity with recombinant human CD27, CD30, DR6, Fas, GITR, HVEM, and TNF RII.

CD40 (48-50 kDa) is a transmembrane glycoprotein mainly expressed on the surface of B cells and also expressed on monocytes, dendritic cells, and thymic epithelium.¹⁻⁴ CD40 is a member of the tumor necrosis factor (TNF)^{1,2} receptor superfamily, which includes the low affinity nerve growth factor (NGF) receptor and CD95/Fas.^{4,5} CD40 is the receptor for CD40 ligand. CD40 ligand (CD40L, CD154, gp39, and TRAM) belongs to the TNF gene family¹⁻³ and is expressed more widely than CD40 predominantly on activated CD4⁺ T cells.

Following interaction with CD40 ligand, CD40 mediates a number of major immunoregulatory functions, central to the control of thymus-dependent humoral immunity and may be critical in the development of cell-mediated immune responses. Other biological actions include B cell homotypic adhesion, proliferation, immunoglobulin isotype switch, and secretion.¹⁻⁴ Activation of CD40 has also been shown to inhibit the growth of certain B cell lymphomas⁶⁻⁸ and to induce the death of transformed cells of mesenchymal or epithelial origin.⁹⁻¹¹

Reagent

Monoclonal Anti-Human CD40 is supplied as approximately 500 µg of antiserum lyophilized from a 0.2 µm filtered solution of phosphate buffered saline.

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 µm filtered phosphate buffered saline to produce a 0.5 mg/ml stock solution of antibody.

Storage/Stability

Prior to reconstitution, store at -20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots. Avoid repeated freezing and thawing. Do not store in a frost-free freezer.

Product Profile

For immunoblotting, a working antibody concentration of 1-2 µg/ml is recommended. The detection limit for recombinant human CD40 is approximately 50 ng/lane and 300 ng/lane under non-reducing and reducing conditions, respectively.

For ELISAs, a working antibody concentration of 0.5-1.0 µg/ml is recommended. The detection limit for recombinant human CD40 is approximately 6 ng/well.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working dilutions by titration.

Endotoxin level is < 10 ng/mg antibody as determined by the LAL method.

References

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