

Product Information

Anti-CD40 Ligand

produced in goat, affinity isolated antibody

Catalog Number **C6487**

Product Description

Anti-CD40 Ligand (CD40L) is produced in goat using purified recombinant human CD40 ligand extracellular domain expressed in *Escherichia coli* as immunogen. Affinity isolated antibody is obtained from goat anti-CD40L antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-CD40 Ligand recognizes recombinant human CD40 ligand by ELISA and immunoblotting.

CD40 ligand (also known as CD154, TRAP, or gp39) is a 261 amino acid type II transmembrane glycoprotein belonging to the tumor necrosis factor (TNF) superfamily.¹⁻³ CD40L is expressed predominantly on activated CD4⁺ T lymphocytes. It is also found in other cell types (NK cells, mast cells, basophils, and eosinophils). Human and mouse CD40L share ~78% sequence identity. The receptor for CD40L is CD40. CD40, a type I transmembrane glycoprotein belonging to the TNF receptor family, is expressed on B lymphocytes, monocytes, dendritic cells, and thymic epithelium.¹⁻⁴

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 The interaction of CD40 and CD40L also plays important roles in monocyte activation and dendritic cell maturation. Activation of CD40 inhibits the growth of certain B cell lymphomas^{5, 6} and induces the death of transformed cells of mesenchymal or epithelial origin.⁷⁻⁹

Reagent

Lyophilized from 0.2 µm-filtered solution in phosphate buffered saline containing carbohydrates.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

To one vial of lyophilized powder, add 0.5 mL of 0.2 µm filtered phosphate buffered saline to produce a 0.2 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

Immunoblotting: a working antibody concentration of 1 µg/mL is recommended.

Flow cytometry: a concentration of 2.5 µg/10⁶ human peripheral blood mononuclear cells treated with PMA and Ca²⁺ ionomycin is recommended.

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

References

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