

Product Information

Anti-CD40 Ligand

Developed in Goat
Affinity Isolated Antibody

Product Number **C 6487**

Product Description

Anti-Human CD40 Ligand (CD40L) is developed in goat using purified recombinant human CD40 ligand extracellular domain expressed in *Escherichia coli* as immunogen. Affinity isolated antigen specific 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-Human 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 approximately 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

Anti-Human CD40 Ligand is supplied as approximately 100 µg of antiserum lyophilized from a 0.2 µm filtered solution in phosphate buffered saline (PBS).

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 µm filtered phosphate buffered saline to produce a 0.1 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 0.1-0.2 µg/ml is recommended. The detection limit for recombinant human CD40 ligand is approximately 2 ng/lane under non-reducing and reducing conditions.

For ELISAs, a working antibody concentration of 0.5-1.0 µg/ml is recommended. The detection limit for recombinant human CD40 ligand is approximately 0.16 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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