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ProductInformation

Anti-CTLA-4
Developed in Goat
Affinity Isolated Antibody

Product Number **C 6612**

Product Description

Anti-Mouse CTLA-4 is developed in goat using a purified recombinant mouse cytotoxic T-lymphocyte-associated molecule 4 (CTLA-4) expressed in mouse myeloma NSO cells as immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-CTLA-4 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Mouse CTLA-4 recognizes the extracellular domain of mouse CTLA-4 by immunoblotting and ELISA. Based on ELISA and immunoblotting (non-reducing conditions), this antibody exhibits approximately 10% cross-reactivity with recombinant human CTLA-4 (CD152).

CTLA-4 and CD28, structurally similar molecules, are members of the immunoglobin (Ig) gene superfamily. They are composed of a single Ig V-like extracellular domain, a transmembrnne domain, and an intracellular domain. CTLA-4 was originally identified as a gene that was specifically expressed by cytotoxic T lymphocytes. However, CTLA-4 transcripts have since been found in both Th1 and Th2, and CD4+ and CD8+ T cell clones.

CTLA-4 and CD28 are receptors for the ligands, CD80 (B7-1) and CD86 (B7-2).[1, 2] Together with their ligands, CTLA-4 and CD28 constitute one of the dominant co-stimulatory pathways that regulate T- and B-cell responses. CTLA-4 elicits T cell help during antigen presentation and functions as a negative regulator of T cell activation.[3, 4] Although both CTLA-4 and CD28 can bind to the same ligands, CTLA-4 binds to B7-1 and B7-2 with 20-100 fold higher affinity than CD28. CTLA-4 is expressed on most T lymphocytes. The level of expression is activation-dependent.[5]

Reagent

Anti-Mouse CTLA-4 is supplied as approximately 0.1 mg of antibody lyophilized from a 0.2 μm filtered solution in phosphate buffered saline (PBS).

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 at –20 °C. Avoid repeated freezing and thawing. Do no store in “frost-free” freezer.

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.

Product Profile

For immunoblotting, a working antibody concentration of 0.1 to 0.2 μg/ml is recommended. The detection limit for recombinant mouse CTLA-4 is approximately 5 ng/lane and 25 ng/lane under nonreducing and reducing conditions, respectively.

For ELISAs, a working antibody concentration of 0.5 to 1.0 μg/ml is recommended. The detection limit for recombinant mouse CTLA-4 is approximately 0.03 ng/well.

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

Endotoxin: < 10 ng/mg antibody determined by *Limulus* amebocyte lysate (LAL) method.

References

1. Murakami, M., et al., Proc. Natl. Acad. Sci. USA, **93**, 7838 (1996).
2. Gribben, J.G., et al., Proc. Natl. Acad. Sci. USA, **92**, 811 (1995).
3. Karandikar, N.J., et al., J. Exp. Med., **184**, 783 (1996).
4. Walunas, T.L., et al., Immunity, **1**, 405 (1994).
5. Lindsten, T., et al. J. Immunol., **151**, 3489 (1993).

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