Technical Data Sheet

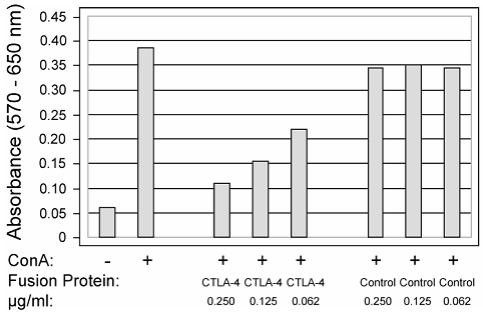
Purified NA/LE Non-Cytolytic Mouse CTLA-4 - IgG Fusion Protein

Product Information

Material Number:	**552133**
Size:	0.5 mg
Concentration:	0.5 mg/ml
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2µm filtered. Endotoxin level is ≤0.01 ng/µg of protein.

Description

The Non-Cytolytic Mouse CTLA-4 - IgG Fusion Protein is composed of the extracellular domain of mouse CTLA-4 (CD152) fused to a mutant Fc region of mouse IgG2a, which is unable to bind to the C1q complement or to Fc receptors. This chimeric protein binds to CTLA-4's ligands B7-1 (CD80) and B7-2 (CD86) on mouse antigen-presenting cells and blocks their binding to both CTLA-4 and CD28. CTLA-4 (also known as CD152) is a cell-surface Ig-superfamily glycoprotein closely related to the CD28 costimulatory receptor. CTLA-4 is expressed on activated T lymphocytes 2-3 days after stimulation through the T-cell receptor. Whereas CD28 delivers a costimulatory signal required for T-cell activation, CTLA-4 is a negative regulator of cell-mediated immune responses. CTLA-4 IgG Fusion Protein has been shown to prevent allograft rejection and induce donor-specific tolerance, inhibit in vitro responses of splenocytes to ConA; inhibit the spontaneous in vitro and in vivo lymphoproliferation in CTLA-4-deficient mice; and limit superantigen-induced T-cell proliferation, anergy, and secretion of IL-2, IFN-γ, and IL-4, but not TNF-α or IL-10.



Inhibition of ConA-induced proliferation of splenic T lymphocytes by Non-Cytolytic Mouse CTLA-4 - IgG Fusion Protein. *C57BL/6 splenocytes were cultured for three days, either with no stimulation or with 4 µg ConA per 10^6 cells, as indicated. The indicated concentrations of either Non-Cytolytic Mouse CTLA-4 - IgG Fusion Protein or a control fusion protein were added to ConA-stimulated cells. Cell proliferation was quantitated by the MTT fluorometric assay. The CTLA-4 fusion protein inhibited ConA-induced cell proliferation in a dose-dependent manner, whereas the control fusion protein had little effect.*

Preparation and Storage

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Avoid multiple freeze-thaws of product.

The fusion protein solution should be stored at -20°C until the vial is opened. Thawed aliquots may be stored for at least 1 week at 4°C.

Application Notes

Application

Blocking	Routinely Tested

Recommended Assay Procedure:

This fusion protein has been tested by LAL assay for endotoxin level, by SDS-PAGE to assure purity, and by an *in vitro* T-cell proliferation assay to assure blocking activity.

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Steurer W, Nickerson PW, Steele AW, Steiger J, Zheng XX, Strom TB. Ex vivo coating of islet cell allografts with murine CTLA4/Fc promotes graft tolerance. *J Immunol.* 1995; 155(3):1165-1174.(Biology)

Tivol EA, Boyd SD, McKeon S, et al. CTLA4Ig prevents lymphoproliferation and fatal multiorgan tissue destruction in CTLA-4-deficient mice. *J Immunol.* 1997; 158(11):5091-5094.(Biology)

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