

Mouse Nonlytic CTLA4/Fc Fusion Protein

CATALOG#: MF120A4**QUANTITY:** 1 mg**MOLECULAR STRUCTURE:****TRANSFECTANT CELL LINE:****STORAGE CONDITIONS:****PRODUCT STABILITY:****ACTIVITY RANGE:****LOT#:****CONCENTRATION:** 1 mg/ml

A soluble 97 kd dimeric fusion protein consisting of the extracellular (160aa) domain of mouse CD152 (CTLA4) fused to mutant mouse IgG2a Fc.

NS1 cells

Store stock solution at <-20⁰C. Store working solution at 4⁰C. Freeze/Thawing is not recommended.

Product should retain for at least one year after shipping date when stored at <-20⁰C and the working solution should retain for at least one week at 4⁰C.

The 50% inhibition of CTLA4/Fc on T cell proliferation triggered by Con A is at concentration of 0.25-0.5 µg/ml measuring in an in vitro T-cell proliferation assay.

FORMULATION: Nonlytic CTLA4/Fc is supplied as a frozen liquid comprised of 0.22 µm sterile-filtered PBS (PH 7.4, 50 mM Sodium Phosphate, 100 mM Potassium Chloride, 150 mM NaCl) and containing no preservatives.

PRODUCTION: Mouse CTLA4/Fc fusion protein was purified from serum free tissue culture supernatant of NS1 transfectants. Purity was >99% by SDS-PAGE. The endotoxin level is ≤0.06 EU per µg of CTLA4/Fc.

INFORMATION: Mouse CD152 is a cell surface glycoprotein expressed at low levels on activated T cells (1). CD152 is a high affinity receptor for the costimulatory molecules CD80 (B7-1) and CD86 (B7-2) while CD28 binds to CD80 and CD86 with lower Affinity (2, 3). CD28 and CD152 play important roles in regulating the magnitude and nature of T cell mediated immune response. CTLA4/Fc, a soluble chimeric fusion protein, blocks the B7/CD28 signaling pathway by binding to CD80 and CD86 (1). Using CTLA4/Fc, many investigators have shown that interruption of the B7/CD28 pathway can lead to suppression of allo- and xenimmune responses, and, in some cases, induction of Ag-specific tolerance (4, 5). However, by blocking B7 generated signals, CTLA4/Fc may prevent the negative regulatory CTLA4 signal (6). A non-cytolytic mouse CTLA4/Fc fusion protein is made by genetically fusing the extracellular domain of mouse CD152 (CTLA4) to mutant mouse IgG2a Fc. Mutations to the complement (C1q) and FcγR I binding sites of the Fcγ2a fragment render CTLA4/Fc incapable to direct antibody directed cytotoxicity (ADCC) and complement directed cytotoxicity (CDC) (4).

1. Linsley, P. S., W. Brady, M. Urnes, L. S. Grosmaire, N. K. Damle, and J. A. Ledbetter. 1991. CTLA-4 is a second receptor for the B cell activation antigen B7. *J Exp Med* 174:561.
2. Lenschow, D. J., T. L. Walunas, and J. A. Bluestone. 1996. CD28/B7 system of T cell costimulation. *Annu Rev Immunol* 14:233.
3. Linsley, P. S., J. L. Greene, W. Brady, J. Bajorath, J. A. Ledbetter, and R. Peach. 1994. Human B7-1 (CD80) and B7-2 (CD86) bind with similar avidities but distinct kinetics to CD28 and CTLA-4 receptors [published erratum appears in *Immunity* 1995 Feb;2(2):following 203]. *Immunity* 1:793.
4. Steurer, W., P. W. Nickerson, A. W. Steele, J. Steiger, X. X. Zheng, and T. B. Strom. 1995. Ex vivo coating of islet cell allografts with murine CTLA4/Fc promotes grafts tolerance. *J. Immunol.* 155:1165.
5. Lenschow, D. J., Y. Zeng, J. R. Thistlethwaite, A. Montag, W. Brady, M. G. Gibson, P. S. Linsley, and J. A. Bluestone. 1992. Long-term survival of xenogeneic pancreatic islet grafts induced by CTLA4Ig. *Science* 257:789.
6. Perez, V. L., L. V. Parijs, A. Biuckans, X. X. Zheng, T. B. Strom, and A. K. Abbas. 1997. Induction of peripheral T cell tolerance in vitro requires CTLA-4 engagement. *Immunity* 6:411.

***This Product is intended for Laboratory Research use only.**

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