

## Product Information

### CD152/Fc Chimera, Cytolytic from mouse recombinant, expressed in NS.1 cells

Catalog Number **C4483**

Storage Temperature  $-20\text{ }^{\circ}\text{C}$

Synonyms: CTLA-4, CTLA-4/Fc Chimera, cytolytic

#### Product Description

Recombinant, mouse cytolytic CD152/Fc chimera is a soluble 97 kDa dimeric fusion protein consisting of the extracellular domain (160 amino acid) of mouse CD152 fused to mouse mutant IgG2a Fc domain. The mouse CD152/Fc fusion protein was expressed in NS.1 cells and purified from the serum-free tissue culture supernatant of the NS.1 transfectants.

CD152 and CD28 are structurally similar molecules that are members of the immunoglobulin (Ig) gene superfamily. They are composed of a single Ig V-like extracellular domain, a transmembrane domain, and an intracellular domain. CD152, a cell surface glycoprotein, was originally identified as a gene that was specifically expressed by cytotoxic T lymphocytes. However, CD152 transcripts have since been found in Th1, Th2, CD4+, and CD8+ T cell clones. The level of expression is activation-dependent.<sup>1</sup>

CD152 and CD28 are receptors for the ligands CD80 (B7-1) and CD86 (B7-2).<sup>2,3</sup> CD152 and CD28 together with their ligands constitute one of the dominant co-stimulatory pathways that regulate T and B cell responses. CD152 acts as a co-stimulatory molecule in eliciting T cell help during antigen presentation and functions as a negative regulator of T cell activation.<sup>4,5</sup>

CD152/Fc chimera blocks the B7/CD28 signaling pathway by binding to CD80 and CD86.<sup>6</sup> Using CD152/Fc chimera, many investigators have demonstrated that interrupting the B7/CD28 pathway suppresses both allo- and xenoimmune responses, and, in some cases, induces antigen-specific T cell tolerance.<sup>6-8</sup> However, by blocking B7 generated signals, CD152/Fc chimera may also block the negative regulatory role of CD152 on T cell activation.<sup>9</sup>

This recombinant, mouse CD152/Fc chimera product is supplied in a solution of 0.2  $\mu\text{m}$  sterile-filtered phosphate buffered saline (PBS; 50 mM sodium phosphate, pH 7.4, 100 mM KCl, and 150 mM NaCl) containing no preservatives.

Purity:  $\geq 99\%$  (SDS-PAGE)

The CD152/Fc chimera inhibits concanavalin A-induced T cell proliferation by 50% at a concentration of 0.25–0.5  $\mu\text{g}/\text{ml}$ .

Endotoxin:  $\leq 0.1$  EU/ $\mu\text{g}$  of protein  
(limulus amoebocyte lysate [LAL] method)

#### Precautions and Disclaimer

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

#### Storage/Stability

The product ships on wet ice and storage at  $-20\text{ }^{\circ}\text{C}$  is recommended. Upon initial thawing, store the remaining solution in single-use aliquots at  $-20\text{ }^{\circ}\text{C}$ . Avoid repeated freeze-thaw cycles. The product remains active for at least one year when stored at  $-20\text{ }^{\circ}\text{C}$ . Working solutions are stable for up to one week at 2–8  $^{\circ}\text{C}$ .

## References

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