

## Recombinant Human Cytotoxic T-Lymphocyte Associated Antigen-4/Fc Chimera (rh CTLA-4 / CD152)

**Synonyms:** GSE, IDDM12, CELIAC3

**Introduction:** CTLA-4 is a member of the immunoglobulin superfamily and encodes a protein which transmits an inhibitory signal to T cells. The protein contains a V domain, a transmembrane domain and a cytoplasmic tail. Alternate transcriptional splice variants encoding different isoforms have been characterized. The membrane-bound isoform functions as a homodimer interconnected by a disulfide bond, while the soluble isoform functions as a monomer. Mutations in this gene have been associated with insulin-dependent diabetes mellitus, Graves disease, Hashimoto thyroiditis, celiac disease, systemic lupus erythematosus, thyroid-associated orbitopathy, and other autoimmune diseases.

**Description:** Recombinant Human CTLA-4 produced in insect cells is a homodimeric, glycosylated, polypeptide chain containing a total molecular mass of 80 kDa. Each Subunit(40kDa) is fused to a polipeptide linker to the Fc portion of Human IgG1. CTLA-4 is expressed in low copy number by T-cells only after activation, but it binds CD28-ligand with approximately 20-fold higher affinity than CD28. A soluble form of the extracellular domain of CTLA-4 has been shown to bind CD28-ligand with high avidity and to suppress T-cell-dependent antibody responses in vivo.

Large doses of this soluble protein also suppress responses to a second immunization. Rh CTLA-4 is purified by proprietary chromatographic techniques.

**Source:** Sf9 cells.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** The protein was lyophilized with no additives  
The samples of 1µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized rh CTLA-4 in sterile H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rh CTLA-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh CTLA-4 should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** Greater than 95.0% as determined by RP-HPLC and by SDS-PAGE.

**Amino acid sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Lys-Ala-Met-His-Val.

**Biological Activity:** rh CTLA-4 is fully biologically active when compared to standards.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	10 µg	Cat.N°	11348023
<i>medium</i>	50 µg	Cat.N°	11348025
<i>large</i>	250 µg	Cat.N°	11348027

**ImmunoTools** Excellent Quality - Advantageously priced

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