

## Recombinant Human CTLA4, C13&N15-labeled

Cat. No. CTLA4-228H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human CTLA4 /CD152 MS Standard Protein, C13 and N15-labeled (CTLA4 / CD152, Heavy Labeled) Ala 37 - Phe 162 (Accession # NP\_005205.2) was produced in human 293 cells (HEK293).

**Species** Human

**Source** HEK293

**ProteinLength** 37-162 a.a.

### Description

CTLA-4 (Cytotoxic T-Lymphocyte Antigen 4), also known as CD152 (Cluster of differentiation 152), is a protein receptor that downregulates the immune system. CTLA4 is a member of the immunoglobulin superfamily, which is expressed on the surface of Helper T cells and transmits an inhibitory signal to T cells. The protein contains an extracellular V domain, a transmembrane domain, and a cytoplasmic tail. Alternate splice variants, encoding different isoforms. CTLA4 is similar to the T-cell co-stimulatory protein, CD28, and both molecules bind to CD80 and CD86, also called B7-1 and B7-2 respectively, on antigen-presenting cells. CTLA4 transmits an inhibitory signal to T cells, whereas CD28 transmits a stimulatory signal.[1-3] Intracellular CTLA4 is also found in regulatory T cells and may be important to their function. T cell activation through the T cell receptor and CD28 leads to increased expression of CTLA-4, an inhibitory receptor for B7 molecules. Fusion proteins of CTLA4 and antibodies (CTLA4-Ig) have been used in clinical trials for rheumatoid arthritis.

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|-----------------------|---|
| <b>Form</b>           | Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.  |
| <b>Molecular Mass</b> | CTLA4 / CD152, Heavy Labeled, fused with 6xHis tag at the C-terminus, has a calculated MW of 14.3 kDa. The predicted N-terminus is Ala 37 . DTT-reduced Protein migrates as 25 kDa due to glycosylation.                      |
| <b>Endotoxin</b>      | Less than 1.0 EU per µg of the CTLA4 / CD152, Heavy Labeled by the LAL method.  |
| <b>Purity</b>         | >95% as determined by SDS-PAGE.   |
| <b>Storage</b>        | Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4oC-8oC); After reconstitution under sterile conditions for 1 month (4oC-8oC) or 3 months (-20oC to -70oC). |

## GENE INFORMATION

|                        |   |
|------------------------|---|
| <b>Gene Name</b>       | CTLA4 cytotoxic T-lymphocyte-associated protein 4 [ Homo sapiens ]  |
| <b>Official Symbol</b> | CTLA4   |
| <b>Synonyms</b>        | CTLA4; cytotoxic T-lymphocyte-associated protein 4; celiac disease 3 , CELIAC3; cytotoxic T-lymphocyte protein 4; CD; CD28; CD152; GSE; ICOS; CD152 isoform; celiac disease 3; cytotoxic T-lymphocyte antigen 4; cytotoxic T-lymphocyte-associated antigen 4; cytotoxic T-lymphocyte-associated serine esterase-4; cytotoxic T lymphocyte associated antigen 4 short spliced form; ligand and transmembrane spliced cytotoxic T lymphocyte associated antigen 4; GRD4; CTLA-4; IDDM12; CELIAC3; |
| <b>Gene ID</b>         | 1493  |

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|----------------------------|---|
| <b>mRNA Refseq</b>         | NM_001037631  |
| <b>Protein Refseq</b>      | NP_001032720  |
| <b>UniProt ID</b>          | P16410  |
| <b>Chromosome Location</b> | 2q33  |
| <b>Pathway</b>             | Adaptive Immune System, organism-specific biosystem; Autoimmune thyroid disease, organism-specific biosystem; Autoimmune thyroid disease, conserved biosystem; CTLA4 inhibitory signaling, organism-specific biosystem; Calcineurin-regulated NFAT-dependent transcription in lymphocytes, organism-specific biosystem; Cell adhesion molecules (CAMs), organism-specific biosystem; Cell adhesion molecules (CAMs), conserved biosystem; |
| <b>Function</b>            | protein binding;  |

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