

## CTLA-4 Protein, Human, Recombinant (Flag)

### General Information

|                       |   |
|-----------------------|---|
| Synonyms:             | Cytotoxic T-lymphocyte protein 4;CTLA-4;Cytotoxic T-lymphocyte-associated antigen 4;CD152;CTLA4 |
| Protein Construction: | Lys36-Asp161  |
| Species:              | Human   |
| Expression Host:      | HEK293 Cells  |
| Accession:            | P16410  |
| Molecular Weight:     | 20 KDa (reducing condition)   |
| AA Sequence:          | Lys36-Asp161  |

### QC Testing

|                      |   |
|----------------------|---|
| Biological Activity: | Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first. |
| Purity:              | Greater than 95% as determined by reducing SDS-PAGE. (QC verified)  |
| Endotoxin:           | < 0.1 ng/μg (1 EU/μg) as determined by LAL test.  |
| Formulation:         | Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM PB, 150 mM NaCl, pH 7.4.  |

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

#### Shipping:

In general, Lyophilized powders are shipping with blue ice. Solutions are shipping with dry ice.

### Protein Background

Cytotoxic Tlymphocyte 4(CTLA-4,CD152), is a type I transmembrane T cell inhibitory molecule that is a member of the Ig superfamily. Human or mouse CTLA4 cDNA encodes 223 amino acids (aa) including a 35 aa signal sequence, a 126 aa extracellular domain (ECD) with one Ig-like V-type domain, a 21 aa transmembrane (TM) sequence, and a 41 aa cytoplasmic sequence. It is widely expressed with highest levels in lymphoid tissues. CD28 and CTLA-4, together with their ligands, B7-1 and B7-2, constitute one of the dominant costimulatory pathways

that regulate T and B cell responses. CD28 and CTLA-4 are structurally homologous molecules that are members of the immunoglobulin (Ig) gene superfamily. CTLA4 transmits an inhibitory signal to T cells, whereas CD28 transmits a stimulatory signal. Intracellular CTLA4 is also found in regulatory T Cells and may play an important role in their functions. Tcell activation through the Tcell receptor and CD28 leads to increased expression of CTLA4.

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