### General Information

**Gene Name Synonym:**
- CTLA4

**Protein Construction:**
A DNA sequence encoding the rat Ctl4 (NP_113862.1) (Met1-Asp161) was expressed with a polyhistidine tag at the C-terminus.

**Source:** Rat

**Expression Host:** HEK293 Cells

### QC Testing

**Purity:** > 95 % as determined by SDS-PAGE.

**Endotoxin:**
< 1.0 EU per μg protein as determined by the LAL method.

**Stability:**
Samples are stable for up to twelve months from date of receipt at -70 ºC.

**Predicted N terminal:** Glu 36

**Molecular Mass:**
The recombinant rat Ctl4 consists 137 amino acids and predicts a molecular mass of 15.2 kDa.

**Formulation:**
Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

### Usage Guide

**Storage:**
Store it under sterile conditions at -20 ºC to -80 ºC upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

**Reconstitution:**
Detailed reconstitution instructions are sent along with the products.

### SDS-PAGE:

![SDS-PAGE Image]

### Protein Description

Cytotoxic T-lymphocyte protein 4, also known as CTLA4 and CD152, is a single-pass type I membrane protein and a member of the immunoglobulin superfamily. It is the second member of the CD28 receptor family. The ligands or counterreceptors for these two proteins are the B7 family members, CD80 (B7-1) and CD86 (B7-2). 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. CD152 or cytotoxic T lymphocyte antigen-4 (CTLA-4) is an essential receptor involved in the negative regulation of T cell activation. Because of its profound inhibitory role, CD152 has been considered a sound susceptible candidate in autoimmunity and a persuasive target for cancer immunotherapy. In particular, recent evidence suggests that CD152 is also important in the homeostasis and function of a population of suppressive cells, termed regulatory T cells (Treg).

### References