**General Information**

**Gene Name Synonym:**

PDCD1

**Protein Construction:**

A DNA sequence encoding the cynomolgus PDCD1 (NP_001271065.1) (Met1-Gln167) was expressed with the Fc region of human IgG1 at the C-terminus.

**Source:** Cynomolgus

**Expression Host:** HEK293 Cells

**QC Testing**

**Purity:** > (6.3+91.2) % as determined by SDS-PAGE.

**Bio Activity:**

Measured by its binding ability in a functional ELISA. Immobilized Cynomolgus CD274-His (Cat:90251-C08H) at 10 μg/ml (100 μl/well) can bind Cynomolgus PDCD1-Fc, The EC50 of Cynomolgus PDCD1-Fc is 1.0-2.3 μg/ml.

**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 °C

**Predicted N terminal:** Leu 25

**Molecular Mass:**

The recombinant cynomolgus PDCD1 consists 381 amino acids and predicts a molecular mass of 42.7 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 °C to -80 °C 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.

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**Protein Description**

Programmed cell death 1, also known as PDCD1, is a type I transmembrane glycoprotein, and is an immunoreceptor belonging to the CD28/CTLA-4 family negatively regulates antigen receptor signaling by recruiting protein tyrosine phosphatase, SHP-2 upon interacting with either of two ligands, PD-L1 or PD-L2. PD1 inhibits the T-cell proliferation and production of related cytokines including IL-1, IL-4, IL-10 and IFN-γ by suppressing the activation and transduction of PI3K/AKT pathway. In addition, coligation of PD1 inhibits BCR-mediating signal by dephosphorylating key signal transducer. PD1 has been suggested to be involved in lymphocyte clonal selection and peripheral tolerance, and thus contributes to the prevention of autoimmune diseases. Furthermore, PD1 is shown to be a regulator of virus-specific CD8+ T cell survival in HIV infection. As a cell surface molecule, PDCD1 regulates the adaptive immune response. Engagement of PD-1 by its ligands PD-L1 or PD-L2 transduces a signal that inhibits T-cell proliferation, cytokine production, and cytolytic function.

**References**