Human PD1 / PDCD1 Protein (His Tag), Biotinylated

Catalog Number: **10377-H08H-B**

General Information

Gene Name Synonym:

CD279; hPD-1; hPD-l; hSLE1; PD-1; PD1; SLEB2

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Gln 167) of human PD1 (NP_005009.2) was expressed with a C-terminal polyhistidine tag. The purified protein was biotinylated in vitro.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Leu 25

Molecular Mass:

The recombinant human PD1 consists of 154 amino acids and has a calculated molecular mass of 17.4 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:

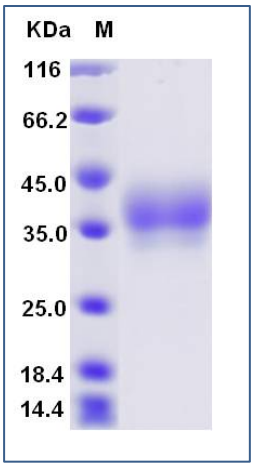
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



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

1.James ES, *et al.* (2005) PDCD1: a tissue-specific susceptibility locus for inherited inflammatory disorders. Genes Immun. 6(5): 430-7. 2.Okazaki T, *et al.* (2007) PD-1 and PD-1 ligands: from discovery to clinical application. Int Immunol. 19(7): 813-24. 3.del Rio ML, *et al.* (2008) PD-1/PD-L1, PD-1/PD-L2, and other co-inhibitory signaling pathways in transplantation. Transpl Int. 21(11): 1015-28.