**InnoCyto Inc.**
15375 Barranca Pkwy, Suite I-103
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# Technical Data Sheet

APC Conjugated Human PD1 Protein (C-His)

**Catalog Number:** 803003, 803004
**Size:** 25 ug, 100 ug
**Target Name:** PD1, PDCD1, CD279, SLEB2
**Regulatory Status:** RUO

## Product Details

**Application:** FC
**Format:** Liquid, APC
**Expression Host:** HEK293
**Species:** Human
**Sources:** Human PD-1 protein (NP_005009.2) (Leu25-Gln167) with C-terminus His tag is expressed in HEK293 cells and conjugated to APC
**Accession Number:** Q15116
**Molecular Weight:** The protein has a predicted molecular weight of 17 kDa. Under DTT-reducing conditions, it migrates at approximately 30-45 kDa on SDS-PAGE prior to conjugation.
**Affinity Tag:** C-His
**Formulation:** 1xPBS buffer, pH7.4, 0.09% NaN3 with a carrier protein
**Endotoxin level:** Not tested
**Protein Concentration:** 25µg size is bottled at 0.1mg/mL concentration. 100 µg size is bottled at lot specific concentration.
**Storage and Handling:** Briefly centrifuge the vial upon receipt. An unopened vial may be stored at 2–8°C for up to six months.

## Background Information

Programmed Death-1 receptor (PD-1, also known as CD279) is a type I transmembrane protein and an immunoregulatory receptor of the CD28/CTLA-4 family. It is expressed on activated T cells, B cells, monocytes, dendritic cells, and some thymocytes. PD-1 binds to ligands PD-L1 and PD-L2, transmitting co-inhibitory signals that suppress T-cell activation, proliferation, cytokine production, and cytotoxic activity by dephosphorylating key signaling molecules. This mechanism promotes immune tolerance and prevents autoimmunity but is exploited by tumors to evade immune surveillance, as many tumors upregulate PD-L1. When tumor-expressed PD-L1 engages PD-1 on immune cells, it blocks T-cell activation and promotes immune exhaustion. Monoclonal antibodies targeting the PD-1/PD-L1 pathway have revolutionized cancer therapy by releasing this immune brake, enhancing anti-tumor immunity and leading to tumor regression in many cancers. Examples include nivolumab and pembrolizumab. This immunotherapy approach is now a major focus in oncology, offering a powerful tool to boost the immune system against cancer and reshape treatment paradigms.

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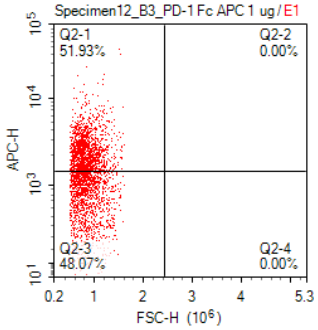
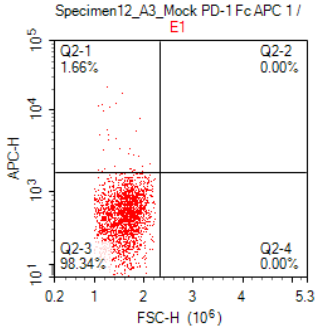
**Product Data**

**A: PD1 CAR-transfected**
**Stained with APC-PD1-His**




**B: Mock-transfected**
**Stained with APC-PD1-His**




CHO cells transfected with either PD1 CAR or Mock plasmid were stained with APC conjugated PD1 (C-His) protein at 1ug_test