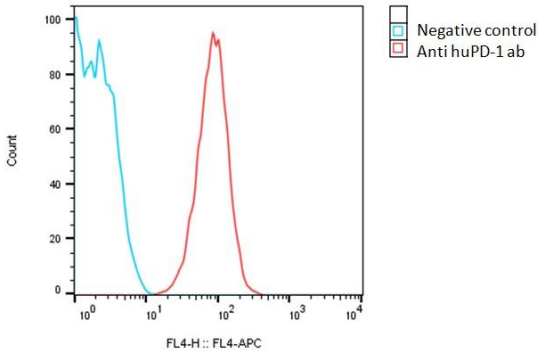
Human PD-1-CHO-K1 Stable Cell Line
Catalog Number: C3070

SPECIFICATIONS

Catalog Number	C3070
Cell Line Name	Human PD-1-CHO-K1 stable cell line
Accession Number	NP_005009.2
Host Cell	Adherent CHO-K1
Quantity	Two vials of frozen cells ($2x10^6$ per vial)
Culture Medium	DMEM with 10% FBS, 4μg/ml puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

DATA

Detection of human PD-1 expression on human PD-1-CHO-K1 stable cells using a monoclonal antibody specific for human PD-1 (BioLegend, Cat #329907)



BACKGROUND

PD-1 (Programmed Cell Death Protein 1) is a cell surface receptor protein belonging to the immunoglobulin superfamily. PD-1 is primarily expressed on the surface of activated T cells, B cells, natural killer cells (NK cells), and monocytes. The primary function of PD-1 is to inhibit T-cell activation and effector functions. When PD-1 interacts with its ligands, PD-L1 (Programmed Death-Ligand 1) and PD-L2 (Programmed Death-Ligand 2), which are expressed on the surface of antigen-presenting cells (APCs) and certain non-immune cells, it sends inhibitory signals to T cells. This inhibitory signaling pathway helps prevent autoimmune responses and limits collateral damage to healthy tissues during immune responses. Many cancer cells upregulate PD-1 and its ligands inhibiting T cell activity thus, creating an immunosuppressive microenvironment allowing cancer cells to thrive and escape immune destruction. PD-1 and its associated pathway have emerged as a promising therapeutic target in the field of cancer immunotherapy. PD-1 inhibitors have shown great success in treating cancer by blocking PD-1's interaction with its ligands, T cells can recognize and attack cancer cells correctly.

References

Chen DS, Irving BA, Hodi FS. Molecular pathways: next-generation immunotherapy—inhibiting programmed death-ligand 1 and programmed death-1. *Clin Cancer Res*. **18(24):**6580-6587. 2012.

Hargadon KM, Johnson CE, Williams CJ. Immune checkpoint blockade therapy for cancer: An overview of FDA-approved immune checkpoint inhibitors. *Int Immunopharmacol*. **62**:29-39. 2018

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