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APC Anti-human CD273 (B7-DC, PD-L2) Antibody

Catalog Number:	120807, 120808
Size:	25 tests, 100 tests
Target Name:	CD273, B7-DC, PD-L2, PDL2, B7DC
Regulatory Status:	RUO

PRODUCT DETAILS

Clone:	24F.10C12
Application:	Flow Cytometry
Reactivity:	Human
Format:	APC
Isotype:	Mouse IgG2a
Antibody Type:	Monoclonal
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA
Protein Concentration:	Supplied at a lot-specific concentration.
Storage & Handling:	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Recommended Usage:	For flow cytometric staining, it is recommended to use 5 µL of this reagent per 0.5-1.0 million cells in a 100 µL volume. Optimal reagent performance should be determined by titration for each specific application. APC has an excitation max at 650 nm and an emission max at 660 nm.
Excitation Laser:	Red Laser (633 nm)
Isotype Control:	301503
RRID:	AB_3759144

BACKGROUND INFORMATION

Human programmed death-ligand 2 (PD-L2), also known as CD273 or B7-DC, is an immune checkpoint protein encoded by the PDCD1LG2 gene. It belongs to the B7 family of immunoregulatory molecules and plays an important role in regulating T-cell responses and maintaining immune balance. PD-L2 is expressed primarily by antigen-presenting cells, including dendritic cells and macrophages, and can also be induced on certain other cell types under inflammatory conditions. By interacting with its receptor, PD-L2 can modulate T-cell activation, cytokine production, and immune tolerance.

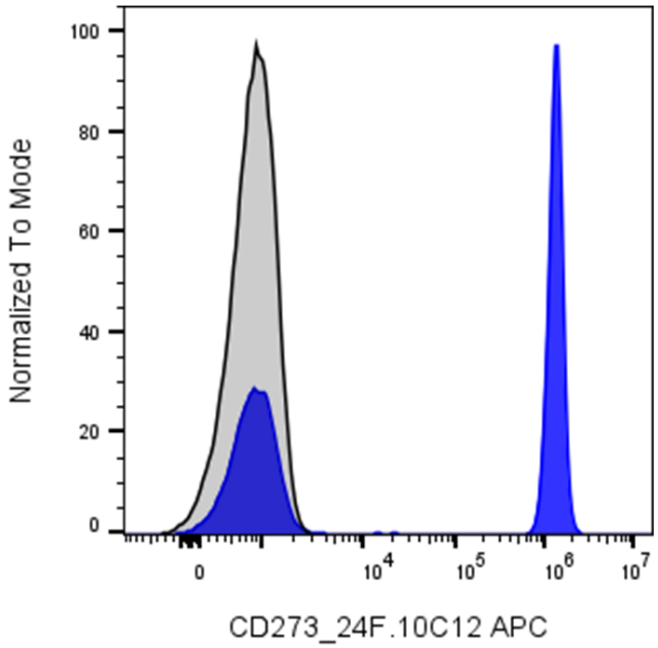
PD-L2 is a type I transmembrane glycoprotein composed of an extracellular region containing two immunoglobulin-like domains, a single transmembrane segment, and a short intracellular cytoplasmic tail. Its principal established receptor is programmed cell death protein 1 (PD-1, CD279), expressed on activated T cells and other immune cells. Binding of PD-L2 to PD-1 delivers inhibitory signals that reduce T-cell receptor signaling, cytokine production, and proliferation, thereby limiting excessive immune activation. PD-L2 has a higher binding affinity for PD-1 than its related ligand PD-L1 in many experimental systems. Additional interactions,

including binding to RGMb (repulsive guidance molecule b), have been reported and may contribute to immune regulation in particular tissues.

Dysregulated PD-L2 expression can influence disease progression. In cancer, some tumors and tumor-associated immune cells express PD-L2, enabling suppression of antitumor T-cell responses and potentially contributing to immune evasion. PD-L2 expression has been reported in several malignancies, although its prevalence and clinical significance vary by tumor type. In inflammatory and autoimmune conditions, PD-L2-mediated signaling may help restrain damaging immune responses, while altered regulation can affect immune tolerance and inflammation.

PD-L2 is a potential target for cancer immunotherapy. Blocking PD-L2, alone or alongside PD-1/PD-L1 pathway inhibitors, may restore antitumor T-cell activity in selected settings. Researchers are also investigating PD-L2 expression as a biomarker for immune activity and treatment response. Human PD-L2 is widely used in immunology and oncology research to study immune checkpoint signaling, T-cell regulation, and therapeutic strategies targeting the tumor immune microenvironment.

PRODUCT DATA



Human CD273 protein-coated beads (50%) mixed with non-coated beads (50%) were stained with APC Anti-Human CD273 clone 24F.10C12 (color-filled histogram) or an isotype control (gray histogram).

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